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ANNUAL REPORT
OF THE
MASSACHUSETTS COMMISSION
ON MENTAL DISEASES
1916

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FIRST ANNUAL REPORT

OF THE

MASSACHUSETTS COMMISSION ON
MENTAL DISEASES

OF

THE COMMONWEALTH OF MASSACHUSETTS

FOR THE

YEAR ENDING NOVEMBER 30, 1916.



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MEMBERS OF THE MASSACHUSETTS COMMISSION ON
MENTAL DISEASES.

Nov. 30, 1916.

GEORGE M. KLINE, M.D.,	<i>Chairman,</i>	BEVERLY.
JOHN B. TIVNAN,	.	.	.	.	.	SALEM.
HENRY M. POLLOCK, M.D.,	BOSTON.
CHAS. G. DEWEY, M.D.,	BOSTON.
ELMER A. STEVENS,	SOMERVILLE.

OFFICERS.

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Assistant to Director. *Assistant to Director.*

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FLORENCE H. MCINTIRE, <i>Stenographer.</i>	M. LOUISE SMALL, <i>Clerk.</i>
EDA W. FITCH, <i>Clerk.</i>	REBECCA F. WARSHAW, <i>Clerk.</i>
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ELMER E. SOUTHARD, M.D., *Pathologist.*

MYRTELLE M. CANAVAN, M.D., *Assistant Pathologist.*

DOUGLAS A. THOM, M.D., *Assistant Pathologist.*

HARRY C. SOLOMON, M.D., *Investigator of Brain Syphilis.*

LILLIAN D. RIDER, *Stenographer.*

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BENJAMIN F. WARD, <i>Visitor.</i>	MAUDE F. FREETHY, <i>Stenographer</i>
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MABEL G. GRAGG, *Visitor.*

Department of Family Care.

FRED F. FLANDERS, Ph.D., *Chemist.*

Department of Standards.

EMILY L. HAINES, *Supervisor of Industries.*

Transportation Agents.

FRED A. HEWEY. CLAIRE T. MCINNERNEY

JOSEPH P. MADDEN.

Laboratory Assistant and Messenger.

The Commonwealth of Massachusetts.

STATE HOUSE, BOSTON, July 23, 1917.

To His Excellency the Governor and the Honorable Council.

The undersigned, members of the Massachusetts Commission on Mental Diseases, respectfully submit the first annual report of the Commission for the year ending Nov. 30, 1916. The matters, however, relating to general statistics cover the year ending September 30.

GEORGE M. KLINE.

JOHN B. TIVNAN.

HENRY M. POLLOCK.

CHAS. G. DEWEY.

ELMER A. STEVENS.

The Commonwealth of Massachusetts.

REPORT OF THE MASSACHUSETTS COMMISSION ON MENTAL DISEASES.

REORGANIZATION.

In accordance with chapter 285 of the General Acts of 1916, which was passed by the Legislature on June 1, 1916, to take effect Aug. 1, 1916, the Massachusetts State Board of Insanity was abolished and the Massachusetts Commission on Mental Diseases established.

CHAPTER 285, GENERAL ACTS OF 1916.

AN ACT TO ABOLISH THE STATE BOARD OF INSANITY AND TO ESTABLISH THE MASSACHUSETTS COMMISSION ON MENTAL DISEASES.

Be it enacted, etc., as follows:

SECTION 1. The state board of insanity, existing under authority of chapter eighty-seven of the Revised Laws and acts in amendment thereof and in addition thereto, is hereby abolished. All the rights, powers and duties of said board are hereby transferred to and shall hereafter be vested in and exercised by the commission on mental diseases, established hereunder, which shall in all respects be the lawful successor of said board. Immediately upon the appointment and qualification of said commission and the taking effect of this act under the provisions of section nine, all books, papers, maps, plans, charts, records and all other documents or equipment in the possession of said board shall be delivered to said commission. All the present employees of the board of insanity shall continue to perform their usual duties upon the same terms and conditions unless suspended or removed under the provisions of the civil service rules.

SECTION 2. The commission on mental diseases shall consist of a director, and four associate members, all of whom shall be appointed by the governor, with the advice and consent of the council, — the director, for a term of five years, and the associate members for terms of one, two, three and four years, respectively, from the date of appointment, as the governor shall designate. Thereafter the governor shall annually appoint, in like manner, an associate member for a term of four years, and every

fifth year, a director; shall fill all vacancies for the unexpired term, and may, for cause and with the consent of the council, remove said members. The director, and at least two of the associate members, shall be physicians and experts in the care and treatment of the insane. The director shall receive such salary, not exceeding seven thousand five hundred dollars, as the governor and council shall determine. The associate members shall serve without compensation, but they, and the director, shall be reimbursed for expenses necessarily incurred in the performance of their duties.

SECTION 3. The commission shall have general supervision of all public and private institutions and receptacles for insane, feeble-minded or epileptic persons, or for persons addicted to the intemperate use of narcotics or stimulants, except the Norfolk state hospital and the Hospital Cottages for Children at Baldwinville. When so directed by the governor they may assume and exercise the powers of the board of trustees of any state institution under their supervision in any matter relative to the conduct or management thereof. The commission shall have the same powers relative to state charges in institutions or other places under its supervision, and to their property, as are vested in towns and overseers of the poor in the matter of the support and relief of paupers.

SECTION 4. The director shall be the administrative and executive head of the commission. He shall administer the laws relative to the classes of persons in the institutions under the supervision of the commission, shall prepare rules and regulations for its consideration, shall appoint such agents and subordinate officers as the commission may deem necessary, and shall fix their compensation, subject to the approval of the governor and council.

SECTION 5. The commission shall visit every institution under its supervision at least once a year, and oftener if the governor so directs. It shall ascertain by actual examination and inquiry whether the laws relating to the persons in custody or control therein are properly observed, shall give such directions as will insure correctness in the returns required in respect to such persons, and may use all necessary means to collect all desired information. The commission shall carefully inspect every part of the institution visited with reference to its cleanliness and sanitary condition, the number of patients in seclusion or restraint, the dietary of the patients and any other matters which it may consider material, and shall offer to every patient an opportunity for an interview with its visiting members or agents.

SECTION 6. The commission may annually license any suitable person to establish and maintain a hospital or private house for the care and treatment of the insane, epileptic, feeble-minded, and persons addicted to the intemperate use of narcotics or stimulants, and may at any time revoke the license. No such license shall be granted unless the said commission is satisfied, after investigation, that the person applying therefor is a duly qualified physician, as provided in section thirty-two of chapter

five hundred and four of the acts of the year nineteen hundred and nine, and has had practical experience in the care and treatment of such patients. Licenses granted hereunder shall expire with the last day of the calendar year in which they are issued, but may be renewed. The board shall have power to fix reasonable fees for said licenses upon renewals thereof.

SECTION 7. Whoever after the first day of January in the year nineteen hundred and seventeen establishes or maintains such a hospital or private house, unless duly licensed under authority of this act, shall be guilty of a misdemeanor and shall be punished by a fine of not more than five hundred dollars.

SECTION 8. So much of chapter seven hundred and sixty-two of the acts of the year nineteen hundred and fourteen as is inconsistent herewith is hereby repealed.

SECTION 9. So much of this act as authorizes the appointment of a commission on mental diseases shall take effect upon its passage. The other provisions hereof shall take effect upon the appointment and qualification of the members thereof, but not before the first day of August, nineteen hundred and sixteen. [*Approved June 1, 1916.*]

His Excellency Governor Samuel W. McCall appointed as members of this Commission George M. Kline, M.D., director, for a period of five years; John B. Tivnan for a period of four years; Henry M. Pollock, M.D., for a period of three years; Charles G. Dewey, M.D., for a period of two years; and Hon. Elmer A. Stevens for a period of one year.

Considerable time was necessarily spent by the Commission in visiting the institutions under its supervision and becoming acquainted, studying their needs and determining what requests for special appropriations for new construction should be made to meet these needs during the coming year. Twenty-four such visits were made.

Sufficient time was not available to the Commission to outline a policy of Statewide development which would extend over a period of at least ten years. Accordingly, only such plans for new construction as had been previously studied and approved, which would in part care for the overcrowded condition in the institutions, received consideration. In addition, the Commission was confronted by many problems relating to water supply and sewage disposal systems requiring attention.

A topographical survey of the property purchased by the former State Board of Insanity for a new school for the feeble-minded at Belchertown was ordered shortly after the organiza-

tion of the Commission. It was understood that this property consisted of 888 acres, whereas, by actual survey, it appeared that only 619.01 acres has been purchased. An investigation of this matter showed that the parties who had disposed of their property to the Commonwealth had been assessed on 888 acres, whereas the survey revealed actually 619.01 acres.

The Commission firmly believes that in the development of an institution there are four fundamental factors to be satisfactorily settled, viz.:—

1. Sufficient acreage.
2. A satisfactory water supply, both in quality and quantity.
3. A suitable location for sewage disposal system.
4. Adequate transportation facilities.

Pending the determination of these factors, the development of this school has accordingly been delayed.

Similarly, sufficient time was not available to the Commission to proceed with the development of a new Metropolitan Hospital for the mentally sick, the land for which was purchased by the former State Board of Insanity.

The Commission named, as a Central Board of Examiners, in accordance with the recommendation of the committee on uniform curriculum for nurses, Dr. Elisha H. Cohoon, superintendent of the Medfield State Hospital (chairman); Dr. John A. Houston, superintendent of the Northampton State Hospital, and Dr. George L. Wallace, superintendent of the Wrentham State School. A report of the committee has been received and accepted. Drs. Cohoon and Wallace, and Dr. James V. May, superintendent of the Grafton State Hospital, have been appointed by the Commission a committee on training schools.

Recommendations for legislation to the incoming Legislature were made, as follows:—

1. To provide measures to relieve the shortage of nurses and employees in the State institutions.

2. To provide for the extension and development of the Psychopathic Hospital service to other hospital districts.

3. To provide for the sale of the Northampton State Hospital property, the selection of a site for a new hospital, and the construction of buildings and furnishings therefor.

4. To authorize the Commission to receive by agreement from other States, indigent, insane persons.

5. To amend section 2 of chapter 122 of the General Acts of 1916 relative to commitment and discharge of feeble-minded persons.

6. To amend sections 6 and 7 of chapter 285 of the General Acts of 1916 relative to private hospitals.

7. To amend section 82 of chapter 504 of the Acts of 1909 relative to the support of inmates in institutions under the supervision of the Commission.

8. To amend section 75 of chapter 504 of the Acts of 1909 relative to the extension of the period of temporary absence by permission to one year.

9. To amend sections 103 and 106 of chapter 504 of the Acts of 1909 relative to the commitment of persons under indictment, and also the removal of insane prisoners, etc.

10. Relative to chapter 649 of the Acts of the year 1911, regarding the instruction of nurses and attendants, etc., to repeal that part relating to the employment of a supervisor of industries.

11. To amend chapter 73 of the General Acts of 1915 relative to the commitment of dipsomaniacs and others.

REVIEW OF THE YEAR.

ALL CLASSES UNDER CARE.

The number and location of these classes Oct. 1, 1916, were:—

LOCATION.	Insane.	Feeble-minded.	Epileptic (Sane).	Voluntary (Sane).	Inebriates.	Temporary Care.	Totals.	Other Classes.
Worcester State Hospital, . . .	1,494	-	-	-	3	7	1,504	-
Taunton State Hospital, . . .	1,319	-	-	-	-	4	1,323	-
Northampton State Hospital, . . .	1,000	-	-	-	-	-	1,000	-
Danvers State Hospital, . . .	1,537	-	-	-	-	2	1,539	-
Westborough State Hospital, . . .	1,239	-	-	11	28	2	1,280	-
Boston State Hospital, . . .	1,590	-	-	2	-	30	1,622	-
Mental Wards, State Infirmary, . . .	717	-	-	-	-	-	717	-
Grafton State Hospital, . . .	1,750	-	-	-	-	-	1,750	-
Medfield State Hospital, . . .	1,680	-	-	-	-	-	1,680	-
Gardner State Colony, . . .	794	-	-	-	-	-	794	-
Monson State Hospital, . . .	323	-	670	-	-	-	993	-
Bridgewater State Hospital, . . .	839	-	-	-	-	-	839	-
Foxborough State Hospital, . . .	347	-	-	-	-	-	347	-
Family care, under Commission, . . .	64	-	-	-	-	-	64	-
Massachusetts School for the Feeble-minded.	-	1,590	-	-	-	-	1,590	-
Wrentham State School, . . .	-	992	-	-	-	-	992	-
McLean Hospital, . . .	211	-	-	1	-	-	212	-
Twenty-four other private institutions,	144	1	-	17	7	1	170	63
Elm Hill Private School and Home for the Feeble-minded.	-	48	-	-	-	-	48	-
Terrace Home School, . . .	-	11	-	-	-	-	11	-
Almshouses, . . .	-	243 ¹	-	-	-	-	243 ¹	-
Total under care, . . .	15,048	2,885	670	31	38	46	18,718	63
Viz.:—								
Public care, . . .	14,693	2,825	670	13	31	45	18,277	-
Institutions and family care under trustees.	14,629	2,582	670	13	31	45	17,970	-
Family care under Commission, . . .	64	-	-	-	-	-	64	-
Almshouses, . . .	-	243	-	-	-	-	243	-
Private care, . . .	355	60	-	18	7	1	441	63
McLean Hospital, . . .	211	-	-	1	-	-	212	-
Twenty-six private institutions, . . .	144	60	-	17	7	1	229	63

¹ Taken from reports of overseers of the poor, March, 1916. Includes patients placed in family care by trustees.

THE WHOLE NUMBER OF THESE CLASSES

under care Oct. 1, 1916, was 18,718, being 1 such person to every 201 of the estimated population of the State. Of this number, 15,048, or 80 per cent., were insane; 2,885, or 15 per cent., feeble-minded; and 670, or 3 per cent., epileptic (sane). Their increase for the year was 581.

The whole number of such persons under public care was 18,277; under private care, 441.

The increase of such persons under public care for the year was 575; their average annual increase for the last five years, 591.

THE INSANE

under care Oct. 1, 1916, numbered 15,048, being 1 insane person to every 250 of the estimated population of the State. In addition, there were 1,213 persons who were temporarily absent from institutions, and a considerable number of others in the community who had been previously discharged or had never appeared in institutions for the insane.

The insane appear under public care in public institutions and boarded out in family care, at public expense, and under private care in private institutions. Their number and increase in these locations for the year, the last five years, the last ten years and the last twenty-five years are shown as follows: —

	NUMBER OCT. 1, 1916.			INCREASE OVER PRE- VIOUS YEARS.					Average Increase, Five Years.	Average Increase, Ten Years.	Average Increase, Twenty-five Years.
	Males.	Females.	Totals.	1916.	1915.	1914.	1913.	1912.			
Public institutions, ¹	7,263	7,366	14,629	319	831	396	379	417	468.4	480.3	400.32
Family care under Commission.	—	64	64	22 ²	216 ²	34 ²	20	18	46.8 ²	22.1 ²	3.64 ²
Total, public, .	7,263	7,430	14,693	297	615	362	399	435	421.6	458.2	396.68
Private institutions, .	113	242	355	5	9	6 ²	2	16	5.2	9.5	5.12
Total, public and private.	7,376	7,672	15,048	302	624	356	401	451	426.8	467.7	401.80

¹ Includes 334 patients in family care under trustees.² Decrease.

THE INCREASE OF THE INSANE

under care for the year was 302, compared with 624 the previous year; 426, the average annual increase for the last five years; 467, the last ten years; and 401, the last twenty-five years.

The number of nonresident insane was 80, compared with 74 the previous year, and 73, the average number the last five years. Of these, 76 were patients in private institutions; and 4, private patients in State hospitals.

It is the policy of the State not to receive into its institutions nonresidents, even as private patients, unless their friends are resident in Massachusetts and have just claims for such service.

THE INCREASE OF THE INSANE UNDER PUBLIC CARE

was 297, compared with 615 the previous year; 421, the average annual increase for the last five years; 458, the last ten years; and 396, the last twenty-five years.

THE INCREASE OF THE INSANE UNDER PRIVATE CARE

was 5, compared with an increase of 9 the previous year; 5, the average annual increase for the last five years; 9, the last ten years; and 5, the last twenty-five years.

In addition to the insane, there were in private institutions *for the insane* 90 other patients, compared with 81 the previous year. Of these, 18 were sane voluntary mental patients, 63 voluntary nonmental patients, 7 inebriates, 1 temporary-care patient and 1 feeble-minded. One of the voluntary sane patients was in the McLean Hospital, where 37.73 per cent. of all patients were under the voluntary relation, without commitment as insane.

THE DECREASE OF THE INSANE IN FAMILY CARE UNDER THE COMMISSION

was 22. The number in family care under institutions on Oct. 1, 1916, was 334, an increase of 17.

ALL ADMISSIONS OF MENTAL PATIENTS

from the community to public institutions and McLean Hospital were 4,222, compared with 4,171 the previous year, and 3,972, the average the last five years. The increase this year

was 55, compared with an increase of 103 the previous year, and 203, the average increase the last five years.

They comprise court commitments as insane, voluntary admissions of the insane, and voluntary admissions of mental patients who were classed as sane.

Court commitments as insane were 3,664, compared with 3,445 the previous year, and 3,409, the average the last five years. The increase was 219, compared with an increase of 94 the previous year, and 138, the average increase the last five years.

Voluntary admissions of the insane were 474, compared with 685 the previous year. Public institutions received 399 such patients, of whom 28, or 7.01 per cent., required subsequent commitment as insane. McLean Hospital received 75 such patients, of whom 4, or 5.33 per cent., required subsequent commitment as insane.

Voluntary admissions of mental patients who were classed as sane were 116, compared with 125 the previous year. Public institutions received 113 such patients, and McLean Hospital, 3.

ALL VOLUNTARY ADMISSIONS

to public institutions and McLean Hospital were 590, compared with 810 the previous year, and 619, the average the last five years. Public institutions received 512 such patients, compared with 759 the previous year, and 552, the average the last five years. McLean Hospital received 78 such patients, compared with 51 the previous year; and 67, the average the last five years.

FIRST CASES OF INSANITY

appeared in public institutions and McLean Hospital to the number of 3,185, compared with 3,147 the previous year, and 3,017, the average the last five years. The increase was 38, compared with an increase of 161 the previous year, and 124, the average increase the last five years.

Of all the commitments of the insane to these institutions (inclusive of insane voluntary patients), 77.57 per cent. appeared for the first time in any institution for the insane.

One insane person came under care for the first time from every 1,183 of the estimated population of the State, compared with 1,173 the previous year, and 1,220, the average from 1910

to 1915. The estimated increase in the population of the State for the year is 76,820; hence the growth of population would have accounted for an increase of 64 in the first cases of insanity. As shown above, there was an actual increase of 38.

THE NATIVITY

of such first cases of insanity does not differ materially from the percentages of the previous year. Exclusive of 14, or .43 per cent., whose birthplaces were unknown, 1,282, or 40.43 per cent., were born in Massachusetts; 1,572, or 49.57 per cent., in New England; 1,780, or 56.13 per cent., in the United States; and 1,391, or 43.87 per cent., in foreign countries.

THEIR PARENTAGE

also corresponds substantially with the percentages of previous years. Exclusive of 242, or 7.59 per cent., whose birthplaces were unknown, 506, or 17.19 per cent., of the mothers were born in Massachusetts; 780, or 26.50 per cent., in New England; 927, or 31.50 per cent., in the United States; and 2,016, or 68.50 per cent., in foreign countries.

Exclusive of 229, or 7.18 per cent., whose birthplaces were unknown, 478, or 16.16 per cent., of the fathers were born in Massachusetts; 752, or 25.43 per cent., in New England; 894, or 30.24 per cent., in the United States; and 2,062, or 69.76 per cent., in foreign countries.

THEIR AGES

vary but little from the averages of previous years. The age of 60 or more had been reached by 648, or 20.47 per cent., when admitted for hospital treatment; by 487, or 17.22 per cent., when insanity began. The mean age was 43.01 years on admission; 40.07 years at the onset of mental disease.

THE LOCALITIES

where they resided at the time of commitment, and where insanity developed, in the main show that the country districts furnish relatively fewer cases of insanity than the more populous centers. The cities and towns of over 10,000 inhabitants com-

prise 80 per cent. of the total population of the State for 1915, and country districts only 20 per cent., whereas 2,586, or 81.19 per cent., of the commitments were made from the former, and 599, or 18.81 per cent., from the latter.

THE CAUSES OF INSANITY

assigned by the physicians of the hospitals were physical in 2,036, or 63.93 per cent.; mental in 132, or 4.14 per cent.; unknown in 997, or 31.30 per cent.; and not insane in 20, or .63 per cent.

Congenital causes were assigned in 8.92 per cent.; heredity alone in 5.49 per cent., with other causes, 11.27 per cent., making heredity a causative factor in 16.76 per cent.; alcoholic intemperance alone in 12.18 per cent., with other causes, 4.30 per cent., making alcohol a causative factor in 16.48 per cent.; senility in 11.30 per cent.; coarse brain lesions in 10.61 per cent.; and syphilis in 9.70 per cent. These six causes were operative in 73.77 per cent. of this year's first cases of insanity.

THE CURABILITY OF MENTAL DISEASE

in this year's first cases of insanity is practically the same as last year, and does not vary materially from the average.

The mental disease was classed as curable in 589, or 18.49 per cent., of first cases, compared with 21.48 per cent. the previous year, and 19.99 per cent., a two years' average. The outcome in 7,210 such cases (a twelve-year period) indicates an expectation of recovery in 1 out of 2.25 cases.

The mental disease was classed as generally incurable in 1,225, or 38.46 per cent. The outcome in 11,519 such cases (a twelve-year period) indicates an expectation of recovery in 1 out of 27.55 cases.

The mental disease was classed as incurable in 1,141, or 35.82 per cent. The outcome in 11,399 such cases (a twelve-year period) indicates an expectation of recovery in 1 out of 949 cases.

CERTAIN FORMS OF MENTAL DISEASE

occur with great frequency; manic-depressive insanity in 10.71 per cent. of this year's first cases of insanity and in 57.89 per cent. of the forms of mental diseases classed as curable; and

acute alcoholic insanity in 4.65 per cent. of first cases and in 25.12 per cent. of the forms classed as curable. These two forms comprised 15.36 per cent. of first cases, compared with 17.25 per cent. the previous year, and 16.38 per cent., a two years' average. They comprised 83.01 per cent. of forms of mental disease classed as curable, compared with 81.80 per cent. the previous year, and 82.40 per cent., a two years' average. They furnished 74.66 per cent. of first recoveries, compared with 68.72 per cent. the previous year, and 71.69 per cent., a five years' average.

In the groups classed as incurable and generally incurable, dementia præcox occurred in 28.23 per cent. of first cases; chronic alcoholic insanity in 4.43 per cent.; imbecility in 4.65 per cent.; senile insanity in 8.89 per cent.; epileptic insanity in 2.89 per cent.; general paralysis in 8.76 per cent.; and coarse brain lesions in 9.54 per cent. These seven forms, classed as practically incurable, comprised 67.39 per cent. of first cases of insanity, and furnished 6.54 per cent. of first recoveries.

These nine forms of disease comprised 82.75 per cent. of this year's first cases of insanity, compared with 81.88 per cent. the previous year, and 82.81 per cent., a five years' average.

THE DURATION OF MENTAL DISEASE

previous to hospital treatment was less than three months in 1,035, or 36.83 per cent., of first cases, compared with 36.05 per cent., a two years' average; less than six months in 1,333, or 47.44 per cent., compared with 46.81 per cent., a two years' average; less than one year in 1,634, or 58.15 per cent., compared with 57.76 per cent., a two years' average; and one year or more in 1,176, or 41.85 per cent., compared with 42.24 per cent., a two years' average.

The significance of the previous duration of mental disease is evident from the fact that out of 3,464 first recoveries (a twelve-year period), 71.56 per cent. had a previous duration less than three months; 83.34 per cent. less than six months; 91.63 per cent. less than one year; and only 8.37 per cent. one year or more; while the whole duration of insanity was less than three

months in 28.43 per cent.; less than six months in 56.32 per cent.; less than one year in 77.19 per cent.; and one year or more in only 22.81 per cent. These percentages have been substantially constant for the last twelve years.

ALL DISCHARGES.

THE RESULTS OF MENTAL DISEASE

at public institutions and McLean Hospital are shown in the condition of patients on discharge: 444 recovered; 308 were capable of self-support; 673 were improved; 446 not improved; and 126 not insane.

THE RECOVERY RATE

for the whole State was 10.69 per cent. of commitments, inclusive of insane voluntary admissions, compared with 10.21 per cent. the previous year, and 12.59 per cent., a five years' average.

The percentages of recoveries in public institutions and McLean Hospital were: —

Of commitments (inclusive of in-

sane voluntary),	11.14; last five years' average, 12.56
Of whole number of persons,	2.40; last five years' average, 2.77
Of daily average number,	3.02; last five years' average, 3.52

There were 304 recoveries of first cases of insanity, being 9.54 per cent. of such first admissions, compared with 9.25 per cent. the previous year, and 11.31 per cent., a five years' average.

There were discharged,

CAPABLE OF SELF-SUPPORT

from public institutions and McLean Hospital, 308, or 7.50 per cent. of the commitments, compared with 7.53 per cent. the previous year.

THE RESTORATION OF THE INSANE

for the whole State to self-support in the community includes both the recovered and those discharged capable of self-support. Together they numbered 769 this year, or 17.92 per cent. of

commitments, including insane voluntary admissions. The percentages of both these classes in public institutions and McLean Hospital were: —

Of commitments (inclusive of insane voluntary),	17.92; last five years' average, 20.91
Of whole number of persons,	4.15; last five years' average, 4.71
Of daily average number,	5.16; last five years' average, 5.90

DEATHS.

THE DEATH RATE OF THE INSANE

for the whole State during the year was 81.10 per thousand of the whole number of persons treated, compared with 68.8 the previous year, and 75.9, a five years' average.

The percentages of deaths in public institutions and McLean Hospital were: —

Of whole number of persons,	8.20; last three years' average, 7.61
Of daily average number,	10.33; last three years' average, 9.67
Of discharges and deaths,	43.17; last three years' average, 39.52

Mental disease classed as curable was present in 8.57 per cent. of persons who died, compared with 9.75 per cent. the previous year.

The percentage of deaths of first cases occurring within the first three months of hospital residence was 25.85, against 30.16 the previous year.

Senile insanity was present in 19.51 per cent. of all deaths, general paralysis in 21.36 per cent., and coarse brain lesions in 21.75 per cent.

These supposedly incurable brain lesions existed in 62.62 per cent., compared with 52.04 per cent. the previous year.

Tuberculosis was present in 11.07 per cent., compared with 10.71 per cent. the previous year.

Pneumonia (lobar, broncho and hypostatic) was present in 17.67 per cent., organic disease of the heart in 15.29 per cent., organic disease of the kidneys in 3.69 per cent., and malignant tumors in 2.24 per cent.

The statistical data on which the foregoing statements and conclusions are based are found in Tables Nos. 19, 20 and 21 of the Appendix.

THE FEEBLE-MINDED.

THE WHOLE NUMBER OF THE FEEBLE-MINDED

under care Oct. 1, 1916, was 2,885, being 1 feeble-minded person to every 1,334 of the estimated population of the State.

The feeble-minded appear under public care in public institutions and almshouses, and under private care in private institutions. Their number and increase in these locations for the year and the last five years are shown as follows: —

	NUMBER OCT. 1, 1916.			INCREASE OVER PREVIOUS YEARS.					Average Increase, Five Years.
	Males.	Females.	Totals.	1916.	1915.	1914.	1913.	1912.	
School for the Feeble-minded at Waltham.	975	615	1,590	44 ¹	69	68	56	66	43.0
Wrentham School,	401	591	992	318	45	206	19	137	145.0
Hospital Cottages for Children, .	—	—	—	—	—	22 ¹	8 ¹	—	6.0 ¹
Almshouses,	117	126	243	9	64	82 ¹	13 ¹	35	2.6
State Infirmary,	—	—	—	—	—	144 ¹	23	53	13.6 ¹
Total, public,	1,493	1,332	2,825	283	178	26	77	291	171.0
Elm Hill,	36	12	48	1 ¹	5 ¹	1 ¹	3	1 ¹	1.0 ¹
Small private institutions, . .	6	6	12	1 ¹	—	—	3 ¹	5	.2
Total, public and private, .	1,535	1,350	2,885	281	173	25	77	295	170.2

¹ Decrease.

THE INCREASE OF THE FEEBLE-MINDED

under care for the year was 281, compared with 173 the previous year, and 170, the average the last five years.

The number of nonresident feeble-minded was 50, compared with 54 the previous year. Of these, 37 were patients in private institutions; and 13, private patients in State institutions.

It is the policy of the State to receive feeble-minded persons from other States only when there is no school for the feeble-minded in such States, and then only in urgent cases. The nonresident patients are paid for at a rate which fully compensates the State for the cost of their maintenance.

THE EPILEPTIC.

THE WHOLE NUMBER OF THE EPILEPTIC

under care Oct. 1, 1916, was 1,498, being 1 epileptic to every 2,516 of the estimated population of the State.

The epileptic appear under public care in the Monson State Hospital, the State hospitals and other public institutions, and under private care in private institutions. Details will be found under the Monson State Hospital.

Their number and increase in these locations for the year and for the last five years are shown as follows: —

	NUMBER OCT. 1, 1916.			INCREASE OVER PREVIOUS YEARS.					Average Increase, Five Years.
	Males.	Females.	Totals.	1916.	1915.	1914.	1913.	1912.	
Monson Hospital, . . .	519	474	993	22 ¹	52	41	35	36	28.4
State hospitals, etc., . . .	256	225	481	57	22	5	18 ¹	35	20.2
Other public institutions, . . .	8	5	13	—	21 ¹	71 ¹	9	15 ¹	19.6 ¹
Total, public, . . .	783	704	1,487	35	53	25 ¹	26	56	29.0
Private institutions, . . .	5	6	11	1	3 ¹	1	1	—	—
Total, public and private, .	788	710	1,498	36	50	24 ¹	27	56	29.0

¹ Decrease.

In addition, the overseers of the poor report (March 31, 1916) 89 epileptics in city and town almshouses and private families.

THE INCREASE OF THE EPILEPTIC

under care for the year was 36, compared with an increase of 50 the previous year, and 29, the average increase the last five years.

REPORT OF THE PATHOLOGIST.

To the Commission on Mental Diseases.

Following is the pathologist's eighth report and the seventh to cover a full year of work.

The duties of the pathologist to the Commission (originally appointed May 1, 1909) have been designated as follows: (1)

supervision of the clinical, pathological and research work in the various institutions under the Commission's supervision and control; (2) visits to the institutions from time to time; and (3) reports to the Commission comprising conditions, observations and such recommendations as result therefrom.

These duties have been modified, and the entire scope of the pathological service has been broadened, since the establishment of the Psychopathic Hospital and the appointment of the Commission's pathologist to the directorate of the hospital. The hospital performs, besides its local metropolitan district functions, certain Statewide clinical and research functions, including preparatory and extension training courses for State hospital physicians. The present report deals with these latter functions under separate headings.

I. GENERAL.

The pathological service of the Commission is growing fast. The service first gathered momentum in July, 1914, with the appointment of an assistant pathologist with clerical and technical aid. In 1915 an elaborate and systematic special therapeutic investigation into syphilis of the nervous system was begun under a special officer. Now, in the seventh year of this service, a still further advance has been made by the appointment of another assistant pathologist who acts as pathologist for the western district of the State and carries on special therapeutic investigations upon syphilis in wards open for the purpose in the Worcester buildings of the Grafton State Hospital.

Following is the laboratory staff of the Commission on Mental Diseases: —

E. E. Southard, M.D., pathologist, appointed May 1, 1909; since May 1, 1912, director of the Psychopathic Department of the Boston State Hospital.

Myrtelle M. Canavan, M.D., assistant pathologist, appointed July 1, 1914; since July 1, 1916, in special charge of the eastern district work.

Harry C. Solomon, M.D., special investigator in syphilis of the nervous system, appointed Nov. 15, 1915; since Sept. 1, 1916, acting clinical director of the Psychopathic Department of the Boston State Hospital.

Douglas A. Thom, M.D., assistant pathologist, appointed July 1, 1916; acting as special investigator in syphilis of the nervous system and in charge of the western district pathological work.

Lillian D. Rider, secretary, appointed Nov. 16, 1914.

Ellen R. Scott, technician, appointed Dec. 15, 1914.

LABORATORY STAFFS OF THE STATE INSTITUTIONS.

Worcester State Hospital.

Harold I. Gosline, M.D., pathologist, appointed July, 1915.

Julius H. Stean, technician, appointed Oct. 9, 1915.

The Junior Physician on each clinical service aids in post-mortem examinations from his service.

The Worcester laboratory was founded in 1895, and its first pathologist was Dr. Adolf Meyer. The laboratory building was opened in 1905.

Taunton State Hospital.

Abraham Myerson, M.D., clinical director and pathologist, appointed Sept. 13, 1913.

Linneon R. Smith, stenographer, appointed July, 1914.

Marion Sweet, technician, appointed Nov. 13, 1916.

The Taunton laboratory was founded in 1896, and its first pathologist was Dr. Frederick S. Ward.

Danvers State Hospital.

Lawson G. Lowrey, M.D., pathologist, appointed June, 1914.

Rose McKeown, technician and stenographer, appointed December, 1914.

Daniel A. Gould, technician, appointed Feb. 1, 1916.

The Danvers laboratory was founded in 1895, and its first pathologist was the late Dr. William Leonard Worcester.

Westborough State Hospital.

Solomon C. Fuller, M.D., pathologist, appointed 1897.

Miss Emily Robinson, technician, appointed March 17, 1913.

The Westborough laboratory work may be said to have been begun in 1897, with the appointment of Dr. E. Lindon Mellus. The laboratory building was built in 1905.

Boston State Hospital.

Mary E. Morse, M.D., pathologist, appointed January, 1915.

Adele R. Emerson, M.D., technician, appointed Dec. 1, 1916.

The pathological work of the Psychopathic Department of the Boston State Hospital is executed by Myrtelle M. Canavan, M.D., assistant pathologist to the Commission on Mental Diseases. An interne assists.

Monson State Hospital.

Herman Caro, M.D., pathologist, appointed September, 1916.

Edna C. Hogaboom, technician, appointed April, 1914.

Mental Wards, State Infirmary.

Rudolph Kohn, M.D., pathologist, appointed April, 1915. Resigned Sept. 1, 1916.

Thomas J. Heavey, technician, appointed May, 1915.

The first laboratory at Tewksbury was established in 1895, under the direction of Dr. John M. Gile.

Grafton State Hospital.

D. A. Thom, M.D., acting pathologist, appointed July 1, 1916.

Grace Durling, technician, appointed Aug. 1, 1916.

Foxborough State Hospital.

George L. Bunnell, laboratory assistant, appointed Oct. 1, 1916.

Massachusetts School for the Feeble-Minded.

Laboratory work of a special research nature is being carried on by Drs.

E. E. Southard, Annie E. Taft and Myrtelle M. Canavan.

McLean Hospital.

E. Stanley Abbott, M.D., assistant physician and pathologist.

F. Lyman Wells, Ph.D., assistant in psychological pathology.

Upon July 1, 1915, the "prosector" plan was established by which the pathologists of the several institutions are empowered to act from time to time as prosectors to the pathological service, being reimbursed by the Commission for ordinary expenses incurred in Commission work such as investigations of medicolegal and special cases. This plan also permits mutual interchange and substitution of work during vacations, illnesses and other temporary absences.

The following table shows the routine work of the investigative staff of the Commission: —

Visits to institutions by pathologist,	25
By assistant pathologist,	404
By syphilographer,	101
Autopsies,	184
Sudden deaths,	74
Autopsies in cases of sudden death,	25
Severe accidents in institutions,	214
Less severe accidents,	113
Total accidents,	334
Circular letters,	10
Publications,	24

The appropriation of \$5,000 recommended was granted by the Legislature for 1916, being a sum for the purpose of investigation as to the nature, causes, results and treatment of mental disease and defect, and for the publication of the results of said investigation. It is hoped that this sum will be continued during the coming year.

To permit a still further development of the pathological service, and a broadening and fusion of its work with the State-wide clinical and research work rendered possible by the establishment of the Psychopathic Hospital, a bill is to be introduced into the Legislature of 1917 for the Statewide extension of the Psychopathic Hospital service. The text of this bill is as follows:—

AN ACT TO PROVIDE FOR THE DEVELOPMENT AND STATEWIDE EXTENSIONS
OF THE PSYCHOPATHIC HOSPITAL SERVICE.

Be it enacted, etc., as follows:

SECTION 1. The commission on mental diseases is hereby authorized to develop, extend and complete a statewide system of psychopathic hospital service by establishing new hospital and out-patient units in suitable districts in connection with existing or future state hospitals under the supervision of said commission. The administration of the separate new district units and the appropriations granted therefor shall be in accordance with laws governing the state hospitals to which the land, buildings and furnishing of said units shall appertain. The direction of the scientific work in the proposed new units, together with that of the psychopathic department of the Boston state hospital already established under the provisions of chapter four hundred and seventy of the acts of the year nineteen hundred and nine, shall be vested in the commission on mental diseases by means of its duly appointed agents, and said commission shall provide, out of the appropriation for the department, for the salaries and wages of directing and investigative officers and employees and for the expenses of investigation of the nature, causes, treatment and results of mental disease and effect.

SECTION 2. This act shall take effect upon its passage.

The passage of this bill will be a milestone in mental hygiene in the State so far as mental hygiene can be advanced by research.

As to the Statewide function of preparatory and extension training courses for State hospital physicians, the following list of physicians who have embraced the opportunities afforded by psychopathic hospital work will give evidence:—

Louis G. Beall, M.D., Greensboro, N. C., Aug. 10 to Sept. 14, 1916.

Herman Caro, M.D., Monson State Hospital, Feb. 14 to March 29, 1916.

Francis S. Caldicott, M.D., Taunton State Hospital, Jan. 27 to March 8, 1916.

Heman L. Chase, M.D., Boston State Hospital, Jan. 20 to July 31, 1916.

Taliaferro Clark, M.D., United States Public Health Service, July 8 to Aug. 31, 1916.

George W. Davies, M.D., Essex County Hospital, N. J., Sept. 13 to Oct. 13, 1916.

D. R. Gilfillan, M.D., Grafton State Hospital, Dec. 7 to 24, 1915, and Jan. 3 to 17, 1916.

Anna H. Kandib, M.D., Danvers State Hospital, July 25 to Oct. 3, 1916.

Thomas J. O'Brien, M.D., Taunton State Hospital, May 1 to Oct. 13, 1916.

Charles E. Roderick, M.D., Howard, R. I., March 27 to April 17, 1916.

Wm. T. Ramage, M.D., Boston State Hospital, April 17 to May 17, 1916.

J. Duerson Stout, M.D., Government Hospital, Washington, D. C., Sept. 20 to Dec. 15, 1915.

Douglas A. Thom, M.D., Monson State Hospital, Dec. 1, 1915, to Jan. 15, 1916.

Arthur R. Timme, M.D., Harper Hospital, Detroit, Mich., Feb. 24 to June 20, 1916.

James W. Vernon, M.D., Morganton, N. C., Jan. 3 to Feb. 3, 1916.

The most important general feature of our situation is the improvement in efficiency caused by the gradual drawing together of clinical and laboratory interests in the State institutions. This increase of contact between clinical and laboratory men has been largely produced by the necessities of syphilis therapy.

II. ROUTINE OF THE PATHOLOGICAL SERVICE: AUTOPSIES.

Since the establishment of the pathological service during a period of twenty-nine months, 430 autopsies have been performed, in the vast majority of cases by the service officers, in some instances supplemented by hospital pathologists acting as prosecutors. It will be noted that these autopsies are almost all autopsies which would not have been performed except with the facilities of the pathological service, for the majority of these autopsies, as the table below shows, have been performed in institutions that have no pathological services of their own. Where an institution has too few deaths or for other reasons cannot maintain a pathological laboratory, the Commission has stepped in to round out the pathological work of the State and to give uniform advantages of pathological examination to all institutions.

During the year ending Nov. 30, 1916, there were 184 autopsies, being 32 more than the number performed in the previous

year. The increase has been permitted in part by the establishment of the western district.

The following table shows the number of autopsies performed in the different institutions (by the pathological service of the Commission and exclusive of autopsies performed by the staffs of institutions): —

Grafton State Hospital,	49
Medfield State Hospital,	48
Foxborough State Hospital,	26
Psychopathic Department, Boston Hospital,	16
Bridgewater State Hospital,	8
Monson State Hospital,	6
Worcester State Hospital,	6
Northampton State Hospital,	4
Danvers State Hospital,	3
Westborough State Hospital,	3
Massachusetts School for the Feeble-minded,	3
Boston State Hospital,	2
Taunton State Hospital,	1
Wrentham State School,	1
Miscellaneous,	8
<hr/>	
Total,	184

The routine of the pathological service naturally deals primarily with cases of sudden death, not only those which are medicolegal in the narrow sense of a suspicion of foul play, but also other sudden deaths where there might be a question of negligence or accident. The following table gives data concerning sudden deaths reported to the Commission.

In addition to the 184 autopsies there were viewings of bodies in institutions not followed by autopsies by the pathological service, though occasionally followed by autopsies by medical examiners.

Sudden deaths reported to Commission,	74
Number autopsied,	49
Number of autopsies by service,	25
Found dead,	15
Complicated by fractures,	15
Choked by food,	5
Suicides,	9
Homicides,	3
Burns,	1
Probable cerebral hemorrhages,	9

Organic heart disease,	15
Deaths in general paresis or tabes,	14
Miscellaneous and unknown,	9
Epilepsy and asphyxia,	13
Acute infection,	10
Arteriosclerosis and coronary disease,	16

The problem of sudden deaths in institutions is always difficult. Of course, it is generally understood that many cases of sudden death are by no means worthy of medicolegal suspicion. We are now enabled to present an analysis of 133 cases of sudden death of all sorts, both medicolegal and otherwise, and present in the accompanying table a list in order of frequency of the causes of death in these cases.

Analysis, Autopsied Cases (Sudden Deaths).

	1913-14.	1914-15.	1915-16.	Total.
Acute infections,	11	13	8	32
Heart lesions,	4	9	13	26
Foreign bodies in larynx,	3	2	7	12
Homicides,	3	3	3	9
Epilepsy,	1	6	—	7
Suicides,	3	3	1	7
General paresis,	3	1	2	6
Fractures,	1	3	1	5
Tuberculosis,	1	2	2	5
Cerebral hemorrhages,	—	—	5	5
Burns,	1	1	—	2
After tube feeding,	1	—	1	2
Hemorrhage,	1	—	1	2
Thrombosis,	2	—	—	2
Brain tumor,	—	—	2	2
Asphyxia,	—	1	—	1
Collapse after bath,	—	1	—	1
Fall,	1	—	—	1
Œdema brain,	1	—	—	1
Arteriosclerosis,	1	—	—	1
Acute mania,	1	—	—	1
Ruptured bladder,	—	—	1	1
Carcinoma,	—	—	1	1
Katatonie "Hirntod,"	—	—	1	1
Totals,	39	45	49	133

The mental diagnoses in suicides in the hospitals deserve a note, since dementia præcox furnishes 5 cases out of 24 in three years. It has been thought by some workers that manic depressives were the only patients specially apt to suicide, while in England Mott had warned against relaxing vigilance over the dementia præcox cases.

Analysis, Autopsied and Non-autopsied Cases.

	1913-14.		1914-15.		1915-16.		Total.
	Male.	Female.	Male.	Female.	Male.	Female.	
Dementia præcox, . . .	1	-	1	-	3	-	5
Manic depressive, . . .	-	2	2	2	3	1	10
General paresis, . . .	-	-	-	1	-	-	1
Epilepsy,	-	-	-	-	1	-	1
Diagnosis unknown, ¹ . .	3	3	-	-	1	-	7
Total,	4	5	3	3	8	1	24

Diagnoses in suicides in State hospitals, 24.

¹ Death before a definite mental diagnosis determined.

Last year a table was presented showing the general status of laboratory equipment in the different institutions (seventeenth annual report, 1915, page 43). Some improvements have been made in these equipments and others are in process. Five institutions have brine cold chambers for the reception of bodies. All institutions except Gardner Colony are now supplied with autopsy tools, though the equipment at Northampton Hospital is low. Autopsy rooms are not available at Gardner Colony or in the main departments of Grafton Hospital. The lack of facilities at Gardner Colony is such that it is unlikely that many autopsies for routine diagnostic or scientific purposes will be performed there, although many of the cases would be of especial interest. Arrangements for improving the autopsy facilities at the School for the Feeble-minded, Waltham, are nearing completion. Photomicrographic work can now be performed in four institutions, — Worcester, Danvers, Westborough and the Psychopathic Department of the Boston Hospital. The Foxborough State Hospital is providing in its new wing very commodious arrangements for pathological work. The pathological building at Bridgewater should undoubtedly be heated from the central heating plant.

III. ROUTINE OF THE PATHOLOGICAL SERVICE: CASUALTIES.

We have now had a third year's experience in special analysis of the casualties of the institutions. The casualty records of each institution are analyzed by means of an analytical chart of casualties in institutions (Chart G) under three headings, — "statistical," "nature and severity" and "manner of injury."

CASUALTY TABLE A.

Casualties arranged by Institutions.

INSTITUTION.	Males.	Females.	Total Number of Patients.	Total Number of Accidents.
Worcester Hospital,	13	4	17	17
Taunton Hospital,	29	8	37	42
Northampton Hospital,	2	2	4	4
Danvers Hospital,	27	15	42	42
Westborough Hospital,	18	13	31	31
Boston Hospital (main),	6	11	17	17
Psychopathic Department, Boston Hospital,	1	1	2	2
Grafton Hospital,	8	15	23	23
Medfield Hospital,	17	23	40	42
Gardner Colony,	2	2	4	4
Monson Hospital,	16	11	27	30
Foxborough Hospital,	—	1	1	1
Mental Wards, State Infirmary,	2	6	8	8
Bridgewater Hospital,	3	—	3	3
School for the Feeble-minded at Waltham,	12	4	16	16
Wrentham School,	12	4	16	16
McLean Hospital,	2	2	4	5
Glenside,	—	1	1	1
Totals,	170	123	293	304

CASUALTY TABLE B.

*Casualties arranged by Institutions and by Severity of Injury.*¹

	Fractures.	Dislocations.	Other Severe.	Total Severe.	Less Severe.
<i>Receiving Institutions.</i>					
Worcester Hospital,	9	2	4	15	3
Taunton Hospital (42 injuries to 37 patients), . . .	14	1	7	22	26
Northampton Hospital,	3	—	—	3	—
Danvers Hospital,	13	—	4	17	30
Westborough Hospital,	17	2	6	25	13
Boston Hospital:—					
Main Institution,	13	—	2	15	2
Psychopathic Department,	1	—	1	2	—
<i>Institutions chiefly for Transfers.</i>					
Grafton Hospital,	13	4	1	18	5
Medfield Hospital (42 injuries to 40 patients), . . .	10	15	9	34	22
Gardner Colony,	—	—	3	3	1
Foxborough Hospital,	1	—	—	1	—
State Infirmary, Mental Wards,	5	—	3	8	1
<i>Institutions for the Feeble-minded.</i>					
School for the Feeble-minded at Waltham,	8	1	6	15	1
Wrentham School,	8	—	5	13	4
<i>Special Public Institutions.</i>					
Bridgewater Hospital,	2	—	—	2	1
Monson Hospital (30 injuries to 27 patients), . . .	23	3	3	29	3
<i>Special Private Institutions.</i>					
McLean Hospital (5 injuries to 4 patients),	1	1	—	2	1
Glenside,	1	—	—	1	—
Totals,	142	29	54	225	113

¹ When one patient has more than one accident all are tabulated.

Three hundred and four accidents were reported to the Commission during 1916 as against 313 in 1915 and 346 in 1914. There has, of course, been a certain increase in the total number of patients under care during this period; accordingly there is therefore an actual decrease in reported accidents, a little in excess of the obvious decrease. However, there is so much variety in the standards of reporting that it is hard to interpret the figures.

It is curious that the total number of fractures and dislocations remain almost identical in the three years under analysis. How far these fractures and dislocations represent an irreducible minimum remains a question. Dislocations are perhaps even more an index of ungente nursing than fractures, many of which occur in epileptic, feeble-minded and infirm subjects. The figures for future years should prove interesting.

IV. INVESTIGATIONS.

The investigative function of the pathological service may be said to execute the provisions of section 6, chapter 504, Acts of 1909, which section reads in part as follows: "The board shall encourage scientific investigation by the medical staffs of the various institutions under its supervision, shall publish from time to time bulletins and reports of the scientific and clinical work done therein, . . ."

Since 1911 the State Board's estimates have regularly included an estimate of \$2,500 for investigation as to the nature, causes, results and treatment of mental disease and defect and for the publication of the results thereof. In 1915 this estimate was increased to \$5,000 chiefly on the ground that an extensive investigation of the treatment of syphilis of the nervous system was desirable (see Section V.). Besides the expenses incurred in connection with syphilis investigation, a portion of this fund is expended in connection with the autopsy and other routine work mentioned above. The remainder is expended for general purposes of investigation. No attempt will be made in this report to give a comprehensive account of the investigations undertaken, the general nature of which can be seen from the list of publications given below in Section VI. of this report.

An important part of the investigative work of the service has always been hygienic work. There were few epidemics of consequence during the year 1916. The immediate steps taken to

isolate cases of infectious diarrhœa at Medfield State Hospital early in the summer were apparently successful in warding off an epidemic, although it is naturally impossible to say whether there would have been a large epidemic or not.

The bacteriological work done in connection with the autopsies of the pathological service has continued, and various organisms have been recovered that are of practical or scientific interest. Last year a histological review of Danvers material uncovered a case of amœbic dysentery, and this year a reinvestigation of other material for other purposes uncovered a second Massachusetts case, this time at the Medfield State Hospital.

Notes concerning other hygienic work in the institutions will be found in the excerpts from the reports of institutions given below.

The most important investigations of the service naturally relate to psychiatric problems, and these grow very directly out of the routine of the institutions.

Some work in the group classification of mental disease, based in part upon the autopsy experience in the State institutions and partly upon Psychopathic Hospital clinical work, has been done. The several autopsy series of the different State institutions subject to ready analysis now comprise over 5,000 cases. The Psychopathic Hospital intake of new cases approaches 2,000 per annum, and the records of the institution since its opening in 1912 are a mine of information concerning a group of cases which has not hitherto been subject to careful analysis, at least in this country. It will be remembered that about a third of the cases that are examined in the Psychopathic Hospital wards are discharged from the hospital as not insane. The phrase "not insane" means that these patients are not only not insane at the time of discharge, but have not been insane in the opinion of the physicians, — "not insane" does not mean "recovered." Accordingly, the problem of group classification is a much broader one than a problem which faces the State hospital physician for his committed cases. The Psychopathic Hospital's task is in general one of provisional diagnosis. The hospital must within a comparatively short period (as a rule, five to seven days, to permit proper arrangements for transfer or discharge to be made within the statutory ten days of the temporary-care act, under which a majority of Psychopathic Hospital patients are admitted) determine to what sort of institution, if any, the patient should go. Following are the eleven major groups into which our cases

are for convenience divided. It will be observed that each group is a practical group founded upon the desirability of a special form of treatment or care.

Mental Disease Groups.

Syphilitic.	Age process.
Feeble-minded.	Dementia præcox.
Epileptic.	Manic depressive.
Alcohol and drug.	Psychoneurotic.
Coarse brain.	Psychopathic.
Bodily disease.	

The scientific arguments for this group classification and a description of its special advantages will appear in special articles.

The subject of the pathology of the feeble-minded has continued to form an important part of our interests, and the first part of a monograph on the subject has been offered for publication to the Proceedings of the Academy of Arts and Sciences. Special funds for publication of excellent plates have been provided by Dr. W. N. Bullard, formerly chairman of the Monson State Hospital Trustees. This work on the pathology of the feeble-minded is not designed to deal entirely with brain conditions, but to include other somatic conditions, *e.g.*, glandular and osseous. There is no doubt that endocrinology will offer points of importance in the explanation of many kinds of feeble-mindedness. Many workers feel that Mongolian idiocy will be the next form of feeble-mindedness to be scientifically explained, and that, if so, this form of idiocy will be explained upon the lines of internal glandular secretion.

The importance of studies in the "osteological age" of feeble-minded, particularly of the higher grades, has been shown in some preliminary work not yet published. In certain cases the only sign of disharmony in development, which could be definitely proved to exist in the body, consisted in a greater osteological age than the chronological age. In certain instances the mental development of the patient appeared to have advanced or to have failed to advance in accordance with the osteological age. But this topic is entirely within the field of research at the present time.

Special work in the anatomy of brains of epileptics has been continued. It is interesting that the cases of epilepsy with the greatest frequency of fits are often cases in which the least brain change is discoverable. It would seem as if these latter cases

were cases of physicochemical rather than coarse brain diseases. Probably quite a different technique will be necessary for the investigation of the functional or idiopathic epileptics from the technique required in the encephalopathic or coarse brain group. Incidentally, in the study of epileptic material a special investigator under the Commission, Dr. A. E. Taft, has made observations upon local atrophies of the corpus callosum that correspond with overlying cortex lesions. The work on epilepsy has been correlated closely with that of Monson State Hospital, and a forthcoming publication is to present these data in separate form.

As to problems of mental disease in a more narrow sense, structural work has continued, especially in the dementia præcox and manic-depressive groups. Herein very great value has been found to attach to findings in the *upper* layers of the cerebral cortex as opposed to findings in the *lower* layers. The upper layers have been shown by comparative anatomists to be of more recent evolution than the lower layers. There is some ground for supposing that the more complex disorders of a delusional nature and of a "schizophrenic" nature, when of structural origin, are related to disease in the upper layers of the cortex rather than in the lower layers. Publications dealing with this interesting but highly complicated set of considerations are listed below.

The brain collection which accrues from our routine work is growing rapidly, and already forms one of the most important collections in the world. The continuation of the method of routine gross brain photography has facilitated special work. By means of this photograph collection it is possible to readily secure samples of brains that are free from inborn coarse defects, and to study these alongside other brains that are affected by embryological disorders or stigmata. When a special group of cases comes under investigation, then the coarse brain photographs of the external surfaces are supplemented by gross photographs of the brains in frontal section.

Continued use has been made of the elaborate Danvers symptom catalogue in the evaluation of special symptoms. Here again it is important to distinguish the symptoms that occur in cases that die *with* organic brain disease and in cases that die *without* such disease, and inasmuch as the symptom catalogue includes the symptoms of over 1,000 cases autopsied at the Danvers State Hospital, it has proved possible to connect the clinical symptomatological work with the brain work.

Co-operation with all the pathologists and other officers of the institutions has been the rule this year as in the past, and I wish

to commend their energies and courtesies. It is probable that no other State or governmental unit elsewhere has so closely knit an organization for clinical, pathological and research work as the Commission on Mental Diseases in Massachusetts. For geographical reasons the institutions are so mutually accessible that an interchange of ideas and material is constantly possible, whereas in many more sparsely settled States the smaller institutions not provided with laboratories and pathologists continually lose from scientific view important material both anatomically and clinically. In Massachusetts the organization of the Commission's pathological service permits hardly a case to escape adequate investigation if permission for autopsy is granted, and all clinical cases of special interest are speedily heard of by men particularly interested in a given group. Of course, much remains to be done in getting the rate of autopsies to death raised to the level, say, of Binghamton Hospital, New York, where from 75 to 80 per cent. of autopsies have been obtained for some years past.

The further organization of Statewide psychopathic service as provided in the bill printed above will doubtless further consolidate the clinical, pathological and research work of the institutions, and will associate it still more intimately with the social and psychological provinces of psychiatry.

Looking into the future, it would appear we must think of obtaining State support for chemical work in addition to the anatomical, histological and observational work now going forward. The Psychopathic Hospital building in Boston should be utilized as the State's research institute for all matters relating to mental disease, and special wards in different institutions should be equipped for prolonged investigations under less expensive conditions than those which must prevail in the Boston institute. A beginning has already been made in this matter of provision of research wards by the action of the Grafton Hospital trustees in providing syphilis wards in the Worcester building of the Grafton State Hospital.

V. SYPHILIS INVESTIGATION AND TREATMENT.

In regard to the syphilis investigation and treatment by Drs. H. C. Solomon and D. A. Thom, I quote from the report of the senior syphilographer, Dr. Solomon, the following:—

The syphilis work has continued along much the same lines on which it was started, with the intention of accumulating more experience. It

seemed that there could be little doubt that a great deal of improvement could be obtained in many cases of neurosyphilis, including general paresis. It is true, however, that there are a great many cases from which no such improvement can be obtained, and that there are cases in which the improvement is only partial, and others in which it is only temporary.

The endeavor has been to work out some rules in diagnosis that would separate, if possible, the more favorable cases, from a therapeutic standpoint, from those that were less favorable. Another most important point is the following up of the cases that have been under treatment; we now have cases under observation on whom treatment was started three years ago. The care of the patients becomes cumulative, due to the fact that they never are allowed to drop from observation, so that each year the number that are under our care increases.

A further point is to determine, if possible, what form of treatment is the most advantageous. Our work comprises cases treated by mercury and iodide alone; intravenous salvarsan, or its substitutes alone; the combination of salvarsan, mercury and iodides; or the combination of these with intraspinal injections both of mercurialized and salvarsanized serum; or in combination with intraventricular and subdural injections of salvarsanized and mercurialized serum. In each group both successes and failures have been recorded, and we do not yet know which are the more satisfactory, or what combinations.

Owing to the fact that natural remissions occur, and that many cases thought parenchymatous turn out meningovascular, there is always a great deal of skepticism in the minds of the profession when the question of cure or improvement by therapy of general paresis is mentioned. Realizing that there is a good deal of basis for this feeling we have deferred making any formal report of the progress of patients under treatment until we can have a large series of cases observed for a considerable period of time. Our number of cases has been steadily increased, as has the variety of cases, and we feel that during the coming year it will be proper to report on the matter in detail.

In order to compare results of the cases under treatment with the untreated cases a survey is being made of the condition of the untreated cases, that have been admitted and discharged from the Psychopathic Hospital, about 300 in number. This has helped to assure us that the results of treatment are certainly worth while.

The work has been very greatly facilitated by the establishment of the department at Worcester for the treatment of cases; and as a consequence of this very satisfactory arrangement less attention has been paid to the work in the other institutions, as it was felt that more gain could be obtained by working out the treatment along uniform lines at the Grafton division and the Psychopathic division than by more scattering methods.

A very important feature of our work has been the examination, counsel

and treatment of the families of the syphilitic patients admitted to the Psychopathic Hospital. This work has been in progress for a period of more than two years, and made possible by the assistance of the social service department. Through this work many early syphilitic patients have been discovered; some in the latent stages, others in early stages of neurosyphilis, and numerous congenital syphilitics. Through their early recognition treatment has been possible in the stage before damage of a serious nature had occurred.

As syphilis and alcohol are the two etiological factors of mental disease that we can hope at present to cope with, it seems to us that work on the detection and treatment of syphilis before it has reached the nervous system is one of the most important of our duties in mental hygiene. The result of our work in the examination of some 350 families of syphilitics, including the families with syphilis of the nervous system and those with syphilis outside of the nervous system, is to be reported at the meeting of the National Conference of Charities and Corrections in June, 1917.

Along with the work on the families much has been done in the way of propaganda and education. In order to meet the problem of syphilis before it has gone too far, co-operation of the understanding layman and the physician is essential. The importance of syphilis has been very much stressed to the medical students, who have had an opportunity to see the importance of the problem in the causation of mental disease such as is offered in practically no other medical center. The physicians of this community have also been greatly influenced, since patients, or the families of patients suffering from syphilis, were advised to see their family physician, and the matter was then discussed with these physicians. The physicians of the community have been made to feel that they might send in patients for expert examination, and that a patient would be returned to them with directions and advice. A certain amount of educational propaganda has been directed towards the laity. That this has a good effect has been shown by the voluntary application of several very early cases of neurosyphilis on the part of individuals who have heard or read of the work. An interesting illustration of the value of educational propaganda is the case of a woman whose husband died of general paresis at one of the State hospitals. She learned that the disease was syphilitic. Then she recalled the lesson Brieux gave in his "Damaged Goods," referring to hereditary and conjugal syphilis. She came in with her two children for examination. As it happened, she had a positive Wassermann, and the two children had the signs of congenital syphilis; all are now under treatment.

Work with spinal fluids has continued; and we are offering assistance to a number of the State hospitals whenever so desired by them for examination of the fluid from their cases. Some new experimental work on the spinal fluids is in progress. There is also some work in the attempt to cultivate the spirochæte.

VI. EXCERPTS FROM ANNUAL REPORTS OF INSTITUTIONS.

Worcester State Hospital.

The superintendent speaks of finding three cases of pellagra in patients newly admitted from the community. There was no case of contagious disease. "Special attention has been given to syphilis of the nervous system. A series of 15 cases have been treated with salvarsan. In many instances the improvement has been marked. Five have been able to leave the hospital on visit or have returned to regular employment." Permission for autopsy has been obtained in a larger number of cases than ever before. The pathologist makes a special laboratory report dealing with 2,210 routine clinical analyses and 85 autopsies. A card index of clinical symptoms in 500 autopsied cases has been completed. A number of technical methods have been improved. Much bacteriological work has been performed. The relation of dementia præcox to tuberculosis has been especially studied.

Taunton State Hospital.

The superintendent speaks of mental clinics held in Taunton, Fall River and New Bedford. The pathologist presents a 6-page report dealing with clinical and pathological research. Especial attention has been paid to the inheritance of mental disease, and a long paper has been presented to the *American Journal of Insanity* with relation to the transformation of psychotic types, showing that there are two main currents leading to dementia præcox in the descendant, — one of the currents leads from manic-depressive psychosis, another through other paranoid diseases and catatonia. The pathologist also shows that inasmuch as the female side made a special campaign for autopsies, their percentage (50) was much higher than the percentage obtained on the male side (18). Special work has been done on the pathology of the sympathetic nervous system. Granules of a nonfatty composition, termed *argyrophilic*, have been described.

Northampton State Hospital.

The superintendent speaks of the need of a pathologist. Much social service and out-patient work has been done.

Danvers State Hospital.

The pathologist presents a 6-page report in which syphilis figures largely. The report of clinical groups made by the different physicians of the hospital occupies 20 pages. This valuable method of report is unique in the Danvers report among all the State hospital reports of Massachusetts. A special report on social service is presented, giving a summary of 116 investigations, involving 176 home visits, 3 interviews at the clinics, 296 visits to cities and towns and other items.

Westborough State Hospital.

The superintendent speaks of the out-patient clinics at the Massachusetts Homœopathic Hospital, and of the field work on home environments and the histories of the patients. The work first started in 1912. The pathologist deals briefly with syphilis therapeutics, the papers prepared for the anniversary celebration, work upon the cerebellum, and his own work on paresis and other diseases with special study by Cajal's gold chloride method.

Boston State Hospital.

The superintendent speaks of increasing activity of the medical service, staff meetings, typhoid prophylaxis, dysentery prophylaxis, special surgical work by Dr. Irving J. Walker and social service work.

Grafton State Hospital.

The superintendent speaks of the systematization of medical records, the equipment of a small operating room, the installation of Dr. Thom as acting pathologist, deputed from the Commission, the neurosyphilis conference of Nov. 17, 1916, and the special classification of epileptics. (There were 222 epileptics at Grafton at the end of the year.)

Medfield State Hospital.

The trustees speak of the handicap of the resident staff by lack of a resident pathologist.

Monson State Hospital.

The laboratory technician and assistants have taken special courses of instruction during the year. The brain sections have been photographed as formerly. The institution photographer took a prize for photography.

Bridgewater State Hospital.

The superintendent presents an interesting historical sketch of the development of the insane department of the hospital, pointing out the number of men who have gone into important branches of public service from the hospital.

State Infirmary.

A nursery school or free kindergarten was started during the year, to supply mother teaching to 20 motherless children from two to four years old. The school is a sort of play school, run on kindergarten and Montessori lines. Evening classes for State ward girls and classes in physical culture for insane women have been started. Considerable work has been done upon syphilis treatment. Sixty-six cases of drug habit have been treated by the Towns-Lambert method.

Massachusetts School for the Feeble-minded.

Special preventive work was successfully done in stopping the spread of a small diphtheria epidemic. The school was practically quarantined from September 21 to November 18 on account of the prevalence of infantile paralysis. Four physicians have left Waverley service within ten years and become superintendents of other institutions for the feeble-minded. Out-patient clinics are held in Waverley every Thursday, and at Worcester, Fall River, New Bedford and Haverhill once a month. The superintendent delivered 47 public lectures on feeble-mindedness in different cities and towns. There have been 43 clinics at the school for students, teachers and physicians. Scientific investigation in the psychological direction has become of increasing importance. The themes of inquiry are: physical condition, family history, personal and developmental history, record of school progress, examination in school work, practical knowledge and general information, social reactions, economic efficiency, moral reactions and intelligence tests.

Gardner State Colony.

Aside from the usual data concerning the important occupational work of this institution, it is interesting to note that from June 25 to September 10 all clocks were set ahead one hour, carrying out the saving daylight idea.

VII. SCIENTIFIC PUBLICATIONS OF THE MASSACHUSETTS COMMISSION ON MENTAL DISEASES AND OF THE INSTITUTIONS UNDER ITS CONTROL.

The reports of the State Board of Insanity for the years 1914 and 1915 contained complete lists of the titles of papers published since the establishment of the regular accession series. The list at the close of 1915 totaled 142. The number of contributions per annum varies: in 1913, 54 were listed; in 1914, 43; in 1915, 45; in 1916, 38.

Following is a list of 38 contributions for 1916, a few of which failed to appear within the calendar year 1916, but are listed in the order of their accession: —

Whole
No.

STATE BOARD OF INSANITY CONTRIBUTIONS, 1916.

143. 1916.1. "Report on the Mental Examination of Three Hundred Prisoners at the Massachusetts State Prison." C. S. Rossy. Massachusetts State Board of Insanity Bulletin, January, 1916.
144. 1916.2. "Unemployment and Personality. A Study of Psychopathic Cases." H. M. Adler. To appear in Mental Hygiene, Vol. 1, No. 1, January, 1917, pp. 16-24.
145. 1916.3. "On the Application of Grammatical Categories to the Analysis of Delusions." E. E. Southard. Philosophical Review, Vol. XXV., No. 3, May, 1916.
146. 1916.4. "Mental Examination of Police and Court Cases." R. M. Yerkes. Journal of Criminal Law and Criminology, Vol. VII., No. 3, September, 1916, pp. 366-372.
147. 1916.5. "The Use of the Binet Method in Hospitals for the Insane." R. M. Yerkes. Not yet published.
148. 1916.6. "Indications for Wet Packs in Psychiatric Cases. An Analysis of 1,000 Packs given at the Psychopathic Hospital, Boston, Mass." H. M. Adler. Boston Medical and Surgical Journal, Vol. CLXXV., No. 19, Nov. 9, 1916, pp. 673-675.
149. 1916.7 (56 of Danvers Series). "A Study of Some Cases Diagnosed as Paresis in Pre-Wassermann Days." L. G. Lowrey. Journal of Nervous and Mental Diseases, Vol. XLIII., April, 1916.

MASSACHUSETTS COMMISSION ON MENTAL DISEASES CONTRIBUTIONS,
1916.

150. 1916.8. "On Descriptive Analysis of Manifest Delusions from the Subject's Point of View." E. E. Southard. Journal of Abnormal Psychology, Vol. XI., No. 3, August-September, 1916.

Whole
No.

151. 1916.9. "Educational and Psychological Aspects of Racial Well-being." R. M. Yerkes. *Journal of National Educational Association*, November, 1916, Vol. I., No. 3, pp. 348-354, and *Journal of Delinquency*, November, 1916, Vol. I., No. 5, pp. 243-249.
152. 1916.10. "Remarks on Social Research in Public Institutions." E. E. Southard. *Proceedings of the National Conference of Charities and Correction*, 1916.
153. 1916.11. "Remarks on Psychopathic Delinquents." E. E. Southard. *Proceedings of the National Conference of Charities and Correction*, 1916.
154. 1916.12. "The Psychopathic Hospital's Function of Early Intensive Service for Persons not Legally Insane." E. E. Southard. *Proceedings of the National Conference of Charities and Correction*, 1916.
155. 1916.13. "Methods of Expressing Results of Measurements of Intelligence: Coefficient of Intelligence." R. M. Yerkes and Louise Wood. *Journal of Educational Psychology*, December, 1916, Vol. VII., No. 10, pp. 593-606.
156. 1916.14. "Spinal Fluid Sugar." J. B. Rieger and H. C. Solomon. To appear in *Boston Medical and Surgical Journal*, Dec. 7, 1916, Vol. CLXXV., No. 23, p. 817.
157. 1916.15. "An Outline of the Elements of Stammering." Anne B. Stedman. To appear in *Boston Medical and Surgical Journal*, Dec. 7, 1916, Vol. CLXXV., pp. 818-819.
158. 1916.16. "The Genesis of a Paranoic State. Delusions of Persecution based upon a Character Defect in Volitional Equipment." T. H. Haines. To appear in *Journal of Abnormal Psychology*, February-March, 1917, Vol. XI., No. 6, pp. 368-395.
159. 1916.17. "Fatty Degenerative Changes in the Purkinje Cell Belt in Exhaustive Infective Psychoses." E. W. Fell. To appear in *Boston Medical and Surgical Journal*, Dec. 7, 1916, Vol. CLXXV., No. 23, pp. 819-822.
160. 1916.18. "The Yerkes-Bridges Point Scale: as applied to Candidates for Employment at the Psychopathic Hospital." C. S. Rossy. To appear in *Boston Medical and Surgical Journal*, Dec. 7, 1916, Vol. CLXXV., No. 23, pp. 822-824.
161. 1916.19. "The Intensive Group of Social Service Cases." M. C. Jarrett. To appear in *Boston Medical and Surgical Journal*, Dec. 7, 1916, Vol. CLXXV., No. 23, pp. 824-830.
162. 1916.20. "Routine Mental Tests as the Proper Basis of Practical Measures in Social Service: A First Study made from 30,000 Cases cared for by 27 Organizations in Boston and Surrounding Districts." Helen M. Wright. To appear in *Boston Medical and Surgical Journal*, Dec. 28, 1916, Vol. CLXXV., No. 26, pp. 934-948.

Whole
No.

163. 1916.21. "A Psychiatric Contribution to the Study of Delinquency." H. M. Adler. To appear in *Journal of Criminal Law and Criminology*, May, 1917, Vol. VIII., No. 1, pp. 45-68.
164. 1916.22. "On the Dissociation of Parenchymatous (Neuronic) and Interstitial (Neuroglia) Changes in the Brains of Certain Psychopathic Subjects, especially in Dementia Præcox." E. E. Southard. *Transactions of Association of American Physicians*, 1916.
165. 1916.23. "Notes on Gold Sol Diagnostic Work in Neurosyphilis (Psychopathic Hospital, Boston)." H. C. Solomon and E. E. Southard. To appear in *Journal of Nervous and Mental Disease*, March, 1917, Vol. 45, No. 3, pp. 230-236.
166. 1916.24. "The Stratigraphical Analysis of Finer Cortex Changes in Certain Normal-looking Brains in Dementia Præcox." E. E. Southard and M. M. Canavan. To appear in *Journal of Nervous and Mental Disease*, February, 1917, Vol. 45, No. 2, pp. 97-129.

WORCESTER STATE HOSPITAL.

167. 1916.25. "Report on the Clinical Symptomatology and Laboratory Findings in 3 Cases of General Paresis under Intravenous Arseno-Benzol Treatment." G. E. Mott, M.D., and S. M. Bunker, M.D. *Boston Medical and Surgical Journal*, Vol. CLXXV., No. 10, Sept. 7, 1916, pp. 338-342.
168. 1916.26. "A Contribution to the Symptom Complex Associated with Interpeduncular Tumors." Harold I. Gosline, M.D. To appear in *Journal of Nervous and Mental Disease*, April, 1917.
169. 1916.27. Kraepelin on "Paranoid Conditions." Translated by Harold I. Gosline, M.D. *The Alienist and Neurologist*, Vol. 37, No. 2, May, 1916.
170. 1916.28. "The Rôle of Tuberculosis in Dementia Præcox." Harold I. Gosline, M.D. To appear in *American Journal of Insanity*, July, 1917.

TAUNTON STATE HOSPITAL.

171. 1916.29. "Value and Meaning of the Adductor Responses of the Leg." A. Myerson, M.D. *Journal of Nervous and Mental Disease*, Vol. 43, No. 2, February, 1916, pp. 121-138.
172. 1916.30. "Pathological Findings in the Sympathetic Nervous System in the Psychoses." A. Myerson, M.D. *American Journal of Insanity*, Vol. 22, April, 1916.

DANVERS STATE HOSPITAL.

173. 1916.31 (Danvers No. 59). "A Case with Absent Internal Carotid Artery." Lawson G. Lowrey, M.D. *Anatomical Record*, January, 1916.

Whole
No.

174. 1916.32 (Danvers No. 60). "The Wassermann Test in Practical Psychiatry." Lawson G. Lowrey, M.D. *American Journal of Insanity*, Vol. LXXII., April, 1916.
175. 1916.33 (Danvers No. 61). "The Functions of Social Service in State Hospitals." Miss Hannah Curtis, Social Worker. *Boston Medical and Surgical Journal*, Vol. CLXXV., Aug. 24, 1916.

MONSON STATE HOSPITAL.

176. 1916.34. "The Frequency of Epilepsy in the Offspring of Epileptics." D. A. Thom, M.D. *Boston Medical and Surgical Journal*, Vol. CLXXIV., No. 16, pp. 573-575, April 20, 1916.
177. 1916.35. "Epilepsy." Everett Flood, M.D. *Massachusetts Society for Mental Hygiene*, Publication No. 20.
178. 1916.36. "A Bacteriologic Study of the Blood of Seventy Epileptics." H. Caro, M.D., and D. A. Thom, M.D. *Journal of American Medical Association*, Oct. 7, 1916, Vol. LXVII., pp. 1088-1089.
179. 1916.37. "Abnormal Relation between Liver and Brain Weights in Forty-two Cases of Epilepsy." D. A. Thom, M.D. *Journal of Nervous and Mental Disease*, Vol. 43, No. 5, May, 1916, pp. 422-424.
180. 1916.38. "A Question of Epileptic Dementia with Recovery." D. A. Thom, M.D. *Journal of Nervous and Mental Disease*, Vol. 44, No. 6, December, 1916, pp. 517-522.

VIII. SUMMARY.

1. The pathological service of the Commission has been extended, now comprising two districts (eastern and western), a syphilis branch, a training school branch for hospital physicians and a general research branch.

2. The routine of the pathological service of the State Board included 184 autopsies, 25 of which were in cases of sudden death.

3. Seventy-four sudden deaths were reported to the State Board, of which 49 resulted in autopsy (25 by the pathological service and 24 by medical examiners or otherwise).

4. Special investigation of brain syphilis and its treatment was inaugurated Nov. 15, 1915 (see Section V.).

5. More intensive analysis of casualties has been made. There were 225 severe accidents in the institutional group during 1916 as against 174 during 1915, a relative decrease considering the number of patients under care.

6. Visitation of the institutions in the interest of investigation, diagnosis and treatment has been increased in amount (25 visits by pathologist, 404 by assistant pathologists, 101 by syphilographer, exclusive of visits at the Psychopathic Hospital, which is regarded as the base of operation).

7. A system of circular letters from the pathologist's office to the various institutions has been continued, designed to cover special topics of interest or inquiry.

8. The serial numbering of all institutional publications bearing on investigation and propaganda has been continued. The total number of publications for 1916 from the institutions under the control of the Board was 38.

9. Special investigations from the pathological service of the Commission and from the Psychopathic Hospital record as an investigative unit include —

- (a) Routine hygienic problems of local scope.
- (b) Bacteriology of autopsied and other cases.
- (c) A case of amœbic dysentery (Medfield material).
- (d) Special work on the brain changes in the upper layers as opposed to those of the layers in the cortex, particularly in dementia præcox.
- (e) Elaborate study of cell findings in all layers of 20 or 30 areas in five brains.
- (f) Preparation for publication of a monograph on the brain anatomy of the feeble-minded.
- (g) Planimetric work begun upon the relation of white to gray matter.
- (h) Special work on the comparative nature of psychomotor excitement and motor restlessness (Danvers material).
- (i) The application of grammatical categories to the analysis of delusions.

10. Progress in institutions taken separately is described briefly in Section VI. of this group, and may be summarized as follows: —

(a) Practical dental work has been largely increased in several hospitals.

(b) Pathological work at Worcester by Dr. Harold I. Gosline (elaborate photographic studies of fatty changes in the brain; relation of tuberculosis to dementia præcox; microtome for large frozen brain sections).

(c) Clinical and pathological work at Taunton by Dr. A. Myerson (extensive heredity studies, and of the argyrophilic granules, especially in the sympathetic system).

(d) Pathological work at Danvers; preparations for publication of anniversary program for laboratory opening; syphilis studies.

(e) Pathological work in Westborough by Dr. Solomon C. Fuller (anniversary program, special syphilis work with mercurialized serum; Cajal neuroglia, studies of mesoblastic tissue, cerebellum studies).

(f) Pathological work at Boston by Dr. Mary E. Morse, assisted on part time by Dr. Geneva Tryon (further work on a new form of dysentery; sympathetic system studies; studies in organic brain disease).

(g) Psychopathic Hospital (see publications above and items under 9 of this summary); special work by Professor Yerkes on the Point Scale and on the multiple choice method; statistical studies by the social service department.

(h) Pathological work at Monson by Dr. Herman Caro.

(i) Special work in neurosyphilis as mentioned in Section V. of this report.

Respectfully submitted,

E. E. SOUTHARD, M.D.,
Pathologist.

OCCUPATION AND INDUSTRIES.

One hundred and twenty-two visits were made to the State institutions by the Director of Industries.

There was made in June a "Survey of Occupations of the State Institutions under the State Board of Insanity," showing, on June 1, 1916, the number of patients occupied and number of hours employed; also a comparison of the number of patients occupied and number of hours employed on June 1, 1916, with the number of patients occupied and the number of hours employed on Jan. 1, 1915.

Following is an extract from that survey, with table showing, on June 1, 1916, and on Jan. 1, 1915, the total number of patients employed, the total number unable to work, the total number idle, and the total number in each hospital, with per cent.; also table showing the shortage of nurses on that date.

Although there is a marked increase of patients working in the majority of hospitals, an increase of equipment and working space, a greater variety of occupations and a better product than ever before, the number of patients working is lessened in every hospital by the shortage of nurses. There should be a full quota of 1,807 nurses and attendants in the State institutions, exclusive of Gardner State Colony and the Psychopathic Department of the Boston State Hospital. On June 1 there were 1,541 employed, being a shortage of 266 nurses and attendants.

If a hospital force is so short of nurses that the industrial room is closed in order that the nurses in attendance may do other work, what can be

expected of the organization of work upon the wards? This shortage has influenced the work the entire year, making it, in many instances, impossible to continue the daily period of industrial ward work. If this shortage is to continue, the only remedy will be to have more instructors who are not connected with the regular nursing force. Four institutions have reported that they have been unable to send out their regular working gangs, as there are no attendants to care for the men. This is equally true of the gardening for women. At this season of the year the Westborough State Hospital usually has five gangs working outside. On June 1 this year they did not have one. A list is enclosed showing the number and percentage of nurses short on June 1, 1916. The number is fluctuating daily in a greater or less degree.

Following is a copy of a letter from Dr. John A. Houston, superintendent of the Northampton State Hospital: —

The number of nurses on our pay roll on June 1 was 80, of whom 1 in 7 was off duty. This includes the night nurses. The minimum number we require to do our work, before detailing any to industrial work, should be 110.

If we had as large a proportion to patients as the other hospitals average we should have 125, and if as many as some of them have, we should have at least 150. If we could have more nurses we could make a better showing with our industrial work.

As this hospital shows an increase of 12 per cent. of patients working since the former survey, it but hints at the possibilities of what the industrial work could be if the proper number of nurses were employed and the industrial organization was kept intact.

But one hospital shows a less number of patients working than in 1915. Of the 3 hospitals showing a less percentage of workers than the previous year, it can be stated that in addition to the reason given — shortage of nurses — the Boston State Hospital is unable to send more men to the industrial room until a new building or more working space is provided. During the year they have opened a shoe shop, and there is one more male assistant than formerly. On the women's side there was a change of instructors in the fall, and the work has but recently been reorganized.

Grafton and Medfield State Hospitals have yearly an increasing number of demented and infirm patients. The number of patients at the Grafton State Hospital has gradually increased by transfers, and although the number of occupations as well as their quality has increased, yet the teaching force has remained the same as when the hospital housed 235 less patients. The Medfield State Hospital has also broadened its field. The special syphilitic work has been an added factor in the disturbance of the industrial work; also many infirm patients who are able to make their own beds, but who are not able to leave the building, were not listed as workers.

INSTITUTIONS.	Year.	TOTAL NUMBER EM- PLOYED.		TOTAL NUMBER UN- ABLE TO WORK.		TOTAL NUMBER IDLE.		Total Number in Hospital.
		Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	
Worcester Hospital, . . .	1916	1,394	90.81	122	7.95	19	1.24	1,535
	1915	1,273	89.77	110	7.76	35	2.47	1,418
Taunton Hospital, . . .	1916	1,037	76.03	204	14.95	123	9.02	1,364
	1915	899	71.18	203	16.07	161	12.75	1,263
Northampton Hospital, . . .	1916	585	63.18	303	32.72	38	4.10	926
	1915	438	49.60	353	39.98	92	10.42	883
Danvers Hospital, . . .	1916	999	65.90	406	26.78	111	7.32	1,516
	1915	901	61.92	294	20.21	260	17.87	1,455
Westborough Hospital, . . .	1916	919	71.63	217	16.91	147	11.46	1,283
	1915	855	70.60	143	11.81	213	17.59	1,211
Boston Hospital, . . .	1916	902	58.27	450	29.07	196	12.66	1,548
	1915	854	60.10	430	30.26	137	9.64	1,421
Psychopathic Department, Bos- ton Hospital, {	1916	22	22.67	60	61.85	15	15.48	97
	1915	25	30.12	58	69.88	-	-	83
Grafton Hospital, . . .	1916	1,152	70.85	257	15.81	217	13.34	1,626
	1915	1,094	78.65	96	6.90	201	14.45	1,391
Medfield Hospital, . . .	1916	1,067	68.31	339	21.70	156	9.99	1,562
	1915	1,326	81.35	226	13.86	78	4.79	1,630
Gardner Colony, . . .	1916	720	96.77	17	2.29	7	.94	744
	1915	681	92.03	24	3.24	35	4.73	740
Monson Hospital, . . .	1916	851 ¹	85.89	120	12.07	2	.02	993
	1915	787 ²	83.90	103	10.98	8	.85	938
Foxborough Hospital, . . .	1916	213	63.39	40	11.91	83	24.70	336
	1915	154	54.22	72	25.36	58	20.42	284
State Infirmary, . . .	1916	350	50.21	250	35.87	97	13.92	697
	1915	348	48.95	127	17.86	236	33.19	711
Bridgewater Hospital, . . .	1916	372	44.60	200	23.98	262	31.42	834
	1915	341	42.89	254	31.95	200	25.16	795
School for the Feeble-Minded, at Waltham, {	1916	1,415	85.24	254	14.76	-	-	1,669
	1915	1,175	73.67	420	26.33	-	-	1,595
Wrentham School, . . .	1916	1,018	95.14	52	4.86	-	-	1,070
	1915	610	95.31	30	4.69	-	-	640

¹ In addition, 20, or 2.02 per cent., children in kindergarten.

² In addition, 40, or 4.27 per cent., children in kindergarten.

Table showing Nursing Service at the State Institutions, June 1, 1916.

INSTITUTION.	Total Num- ber of Nurses short.	Full Quota of Nurses.
Worcester Hospital,	36	214
Taunton Hospital,	13	146
Northampton Hospital,	30	110
Danvers Hospital,	31	174
Westborough Hospital,	31	202
Boston Hospital,	22	215
Grafton Hospital,	24	192
Medfield Hospital,	24	220
Gardner Colony, ¹	-	-
Monson Hospital,	10	134
Foxborough Hospital,	5	32
State Infirmary,	28	76
Bridgewater Hospital,	12	92
Totals,	266	1,807

¹ Reports no shortage.

In a "Survey of Accommodations for Industrial Work at the State Institutions," made October, 1915, only two institutions were found to be equipped with suitable industrial buildings. The year has seen no betterment of this condition, although the renovation of the building at Foxborough is progressing.

In the report of 1914 a course of training in handwork as a necessary part of the course of the training school for nurses, including both class instruction and experience in the industrial room, was given as one of the necessary developments in the organization of occupational therapy in a hospital. Three years ago there was no hospital where both forms of instruction were required. (See Annual Report, 1915.)

On June 18, 1915, the State Board of Insanity voted that such courses in training schools should be obligatory. This year, for the first time, all the training schools for nurses have had such a course in handwork as a part of the training school course. The work at this time shows an improvement over that of former years. However, the practical experience which the nurses should gain by teaching the patients has not been

regularly given. This has been partly the result of the shortage of nurses.

The Uniform Curriculum for Nurses at the State Institutions has given for "Industries," in the junior year, but twenty hours' minimum, and in the Attendants' Course but forty hours' minimum.

Every hospital but one (8), which had a course in handwork before the work was obligatory, has given more time than this simply in lessons, without counting the practical experience with the patients in the industrial room or ward. The course in handwork can be of no value to institutions or nurses if it is not more than superficial.

The industrial funds show generally an increase over last year. The two hospitals, Northampton and Medfield, which started funds by gifts a year ago have had a successful year. The fund of the Westborough State Hospital has passed the \$2,000 mark, and this without ever selling outside the hospital grounds.

The number of instructors having had special training is now 11, — an increase of 2 over last year, an increase of 4 over the number two years ago, and an increase of 8 over the number three years ago. Could the right instructors for positions have been found, several institutions would have increased their number.

Exhibits and sales have been held by different institutions. The following are of special interest: —

The Art Department of the State Federation of Women's Clubs invited the Worcester, Grafton and Westborough State Hospitals to exhibit the work of diversional occupation of their respective hospitals at a Sectional Conference held in the Women's Club House, Worcester, February 16. Thirty clubs in the vicinity were represented by members.

Owing to the long distance and risk involved, only five institutions in the State sent exhibits to the meeting of the American Medico-Psychological Association, held at New Orleans in April. The Worcester State Hospital received the certificate for the best pottery, Taunton State Hospital for the best lathe work, Danvers State Hospital for the best leather and metal work, Medfield State Hospital for the most varied

exhibit of work, and Gardner State Colony for photographs of work.

Seven State hospitals — Worcester, Taunton, Northampton, Westborough, Grafton, Medfield and Monson — and the two schools for the feeble-minded responded to the invitation to exhibit the work of diversional occupation at the annual convention of the Eastern Arts Association, which was held in Springfield April 20, 21 and 22. Between 1,100 and 1,200 delegates were present, representing the northern and eastern parts of the United States. The exhibit, which was held in the municipal auditorium, was open to the public.

As a result of this exhibition Mr. Frederick Hopkins, director of art education in Massachusetts, and also director of the Massachusetts Normal Art School, requested that the hospital exhibit be shown at the school. The superintendents of the exhibiting hospitals were most willing to co-operate, and the exhibit was opened in the lecture hall of the Massachusetts Normal Art School, to both school and public, from May 2 to 6, inclusive.

The State was asked to send an exhibit to the Exhibition of Applied Arts, Art Institute of Chicago, October 12 to November 15. As everything exhibited was to be passed upon by a jury, only a relatively small number of articles was sent by those institutions which were interested, — Worcester, Northampton, Danvers, Westborough, Boston, Grafton and Monson State Hospitals, Gardner State Colony and McLean Hospital. The result of this exhibit was gratifying, in that practically all weaving, pottery, basketry and rugs, hooked and tied, were accepted. Two coverlets were sold. Although most of the rugs were marked "not for sale," the institutions received letters asking if these could be sold or duplicated.

On November 6, at 10 A.M., a conference of those directly interested in the work of occupation for the mentally ill was held at the Massachusetts School for the Feeble-minded, Waverley. Dr. Fernald and the five members of his staff gave up their day to the conference, and the 38 instructors came away with renewed enthusiasm for the work.

During the year work has developed along many lines. Pottery is still one of the later developments. Taunton, Dan-

vers and Monson State Hospitals have added kilns to their equipment, making a total of five kilns in the State hospitals. Taunton and Monson State Hospitals have also purchased potters' wheels.

More and better weaving is done than formerly. Fifteen looms have been added to the equipment of the institutions during the past year, making a total of 54 in the past three years.

The making of hooked and tied rugs has developed into a most satisfactory industry. The use of raveled burlap for filling makes a beautiful and serviceable rug, and provides an occupation for the demented and disturbed, as well as for those who enjoy more complicated work.

More could be done in the way of diversion, and very much more in the way of gardening.

The war relief funds have again taken a place in the work of the hospitals, the materials having been supplied from outside.

If more instructors were employed and there were more industrial centers, the regular period of work upon the wards under supervision of nurses could be more readily accomplished. If trained volunteer workers could be found who were willing to give their time for two months, with the probability of positions, it would aid in solving the problem. The two trained instructors who did give their time immediately found positions.

The work of occupational therapy has progressed throughout the State. It embraces more patients, employs a larger corps of instructors, and requires more space and equipment; more subjects are taught, and there is more co-operation and general interest throughout the institutions. Still, there is much to be desired in organization and in reaching those patients less easily interested. The great number who would do work which would be of value only from a therapeutic standpoint have not been reached.

Occupational therapy is for the benefit of all classes of patients, not for a selected group. An organization worthy of it should be one where work would continue from day to day, from month to month, and from year to year, and where the countless interruptions would not disturb the daily routine of work on wards or in industrial rooms.

OUT-PATIENT DEPARTMENTS.

The following shows the work accomplished under this heading during July, August and September, 1916:—

WORCESTER STATE HOSPITAL.

REPORT OF SUPERINTENDENT.

Clinics.

Total number of first visits,	37
Total number of patients,	61
Total number of visits,	73

Sources of first visits:—

Referred by physicians,	3
Referred by other hospitals,	1
Referred by schools,	5
Referred by patients,	1
Came by own initiative,	3
Cases discharged from this hospital reporting for first time,	24

Total,	37
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Clinics Held.

Hospital, every Tuesday from 2 to 5 P.M. and 7 to 9 P.M.

Spencer, Good Samaritan Room, Public Library, first Wednesday of each month; 4 first visits, 6 after-care cases.

After-care.

Total number of patients leaving hospital,	202
Total number discharged to after-care,	87
Total number of visits by social worker,	175
Total number of patients visited by social worker,	100
Total number of patients on visit,	86

Boarding-out.

Total number boarded out by hospital,	47
Total number placed,	8
Total number returned,	13
Total number visited by social worker,	60
Total number visited by physician,	14
Total number on visit, discharged and escaped,	3

TAUNTON STATE HOSPITAL.

REPORT OF SUPERINTENDENT.

Clinics.

Total number of first visits,	20
Total number of patients,	38
Total number of visits,	42

Sources of first visits: —

Referred by charitable and other organizations,	6
Cases discharged from this hospital reporting for first time,	14
Total,	20

Clinics held.

Hospital, every Tuesday from 1 to 4 P.M.

New Bedford, second Friday in each month from 9 A.M. to 1 P.M.

Fall River, third Friday in each month from 9 A.M. to 12 M.

After-care.

Total number of patients leaving hospital,	147
Total number discharged to after-care,	12
Total number of patients on visit,	118

Boarding-out.

Total number boarded out by hospital,	40
Total number boarded out by transfer,	18
Total number placed,	2
Total number returned,	1
Total number visited,	21

NORTHAMPTON STATE HOSPITAL.

REPORT OF SUPERINTENDENT.

Clinics.

Total number of first visits,	70
Total number of patients,	70
Total number of visits,	74

Sources of first visits: —

Referred by physicians,	8
Referred by other hospitals,	1
Referred by charitable and other organizations,	19
Referred by courts,	2
Came by own initiative,	6
Cases discharged from this hospital reporting for first time,	12
Relatives inquiring about patients,	22
Total,	70

Papers signed for commitment to Massachusetts School,	10
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Clinics held.

Hospital and office of social worker, July 5, 17; August 1, 21; September 18.
 Springfield, Academy of Medicine, July 5, 19; August 7, 24; September 6, 20.
 Greenfield, Franklin County Hospital, July 10, August 7, September 11.
 Pittsfield, House of Mercy Hospital, July 27, August 24, September 21.

After-care.

Total number of visits by social worker,	53
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Boarding-out.

Total number boarded out by hospital,	36
Total number placed,	1
Total number returned,	2
Total number visited,	31

DANVERS STATE HOSPITAL.

REPORT OF SUPERINTENDENT.

Clinics.

Total number of first visits,	36
Total number of patients,	351
Total number of visits,	108

Sources of first visits: —

Cases discharged from this hospital reporting for first time, . . .	36
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Clinics held.

No regular clinic days at hospital. Physicians will see former patients coming for advice at any time.

Lawrence, city hall: July 6, 12 patients present, 2 first visits; August 15, 6 patients present, 1 first visit; September 26, 14 patients present, 2 first visits.

Gloucester, city hall: July 12, 6 patients present, 1 first visit; August 23, 9 patients present, 3 first visits.

Lynn, city hall: July 19, 9 patients present, 4 first visits; August 30, 9 patients present, 2 first visits.

Salem, city hall: July 26, 5 patients present, 1 first visit; September 6, 5 patients present, 4 first visits.

Malden, city hall: August 9, 7 patients present, 2 first visits; September 20, 17 patients present, 8 first visits.

Haverhill, district court: September 13, 9 patients present, 6 first visits.

Number of Physicians connected with the Hospital Present. — Lawrence: July 6, 1; August 15, 2; September 26, 1. Gloucester: July 12, 1; August 23, 1. Lynn: July 19, 2; August 30, 1. Salem: July 26, 1; September 6, 1. Malden: August 9, 2; September 20, 1. Haverhill: September 13, 1.

Other Visitors Present.

Total number of visitors,	56
Total number of inquirers,	15
Total number of patients reporting by letter,	38

After-care.

Total number of patients leaving hospital,	178
Total number discharged to after-care,	133
Total number of visits by social worker,	146
Total number visited by social worker,	165
Total number on visit,	221

Boarded-out.

Total number boarded out by this hospital,	23
Total number placed,	3
Total number returned,	3
Total number visited,	10

WESTBOROUGH STATE HOSPITAL.

REPORT OF SUPERINTENDENT.

Clinics.

Total number of first visits,	19
Total number of patients,	33
Total number of visits,	49

Sources of first visits: —

Referred by physicians,	1
Referred by other hospitals,	4
Cases discharged from this hospital reporting for first time,	13
Miscellaneous,	1
Total,	19

Clinics held.

Hospital, every Wednesday from 2 to 3 P.M.

Boston, Massachusetts Homœopathic Hospital, every Tuesday from 2 to 3 P.M.

After-care.

Total number of patients leaving hospital,	298
Total number of patients discharged to after-care,	187

Total number of visits by social worker,	184
Total number of patients visited by social worker,	24
Total number of patients on visit,	236

Boarding-out.

Total number boarded out by this hospital,	54
Total number placed,	3
Total number returned,	11
Total number furloughed,	1
Total number visited,	68

BOSTON STATE HOSPITAL.

REPORT OF SUPERINTENDENT.

After-care.

Total number of patients leaving hospital,	172
Total number discharged to after-care,	123
Total number of visits by social worker,	145
Total number visited by social worker,	77
Total number of patients on visit,	167

Boarding-out.

Total number boarded out by hospital,	8
Total number visited,	11
Total number placed on visit,	3

PSYCHOPATHIC DEPARTMENT, BOSTON STATE HOSPITAL.

REPORT OF ADMINISTRATOR.

Clinics.

Total number of first visits,	308
Total number of patients,	655
Total number of visits,	2,384

Sources of first visits: —

Referred by physicians,	24
Referred by hospitals,	43
Referred by charitable and other organizations,	90
Referred by courts,	25
Referred by schools,	1
Came by own initiative,	44
Miscellaneous,	8
Referred by social service,	18
Cases discharged from this hospital reporting for first time,	55

Total, 308

After-care.

Total number of patients leaving hospital,	843
Total number of patients discharged to after-care,	148
Total number of visits by social workers,	406
Total number visited by social workers,	72
Total number on visit,	30

GRAFTON STATE HOSPITAL.

REPORT OF SUPERINTENDENT.

After-care.

Total number of patients leaving hospital,	16
Total number discharged to after-care,	8
Total number of visits by social worker,	69
Total number on visit,	28

Boarding-out.

Total number placed,	3
Total number returned,	13
Total number remaining,	29

MEDFIELD STATE HOSPITAL.

REPORT OF SUPERINTENDENT.

After-care.

Total number of patients leaving hospital,	9
Total number discharged to after-care,	13

Boarding-out.

Total number boarded out,	34
Total number placed,	2
Total number returned,	3
Total number transferred,	7
Total number visited,	67

Number of visits to patients' friends,	43
Number of visits to patients on wards,	24
Number of visits to other agencies,	20
Advice given to friends who came to hospital,	2

GARDNER STATE COLONY.

REPORT OF SUPERINTENDENT.

Clinics.

Total number of first visits,	4
Total number of patients,	8

Sources of first visits:—

Referred by physicians,	3
Referred by Associated Charities,	1

Total,	4
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Clinics held.

Fitchburg, city hall, July 4, August 1, September 6.

Two patients called for further examination.

Three patients seen at Heywood Memorial Hospital.

After-care.

Total number of patients leaving hospital,	39
Total number discharged to after-care,	3
Total number of patients on visit,	7

Boarding-out.

Total number boarded out by hospital,	62
Total number placed,	15
Total number returned,	15
Total number visited,	50

MONSON STATE HOSPITAL.

REPORT OF SUPERINTENDENT.

Clinics.

Total number of first visits,	9
Total number of patients,	10
Total number of visits,	10

Sources of first visits:—

Referred by physicians,	7
Came by own initiative,	2

Total,	9
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FOXBOROUGH STATE HOSPITAL.

REPORT OF SUPERINTENDENT.

After-care.

Total number of patients leaving the hospital,	16
Total number discharged to after-care,	7
Total number of patients on visit,	14 ¹

BRIDGEWATER STATE HOSPITAL.

REPORT OF MEDICAL DIRECTOR.

*Clinics.*²

Total number of first visits,	1
Total number of patients,	6
Total number of visits,	13

Sources of first visits:—

Referred by physicians,	1
Relative calling for advice,	1

MASSACHUSETTS SCHOOL FOR THE FEEBLE-MINDED.

REPORT OF SUPERINTENDENT.

Clinics.

Total number of consultations,	179
Total number of patients seen,	55
Seen at school,	45
Seen at Worcester,	10
Advised by letter,	76
Advised by telephone,	33
Relatives seen and advised,	15
Total,	179

Total number of first consultations,	82
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Sources of first consultations:—

Referred by physicians,	22
Referred by other hospitals,	5
Referred by charitable and other organizations,	15
Referred by courts,	4
Referred by schools,	11
Came by own initiative,	25
Total,	82

¹ Of this number, 12 report to the out-patient department of the Psychopathic Department of the Boston State Hospital; 2 report to this hospital by letter at stated intervals.

² Clinics held at Brockton Hospital.

Clinics held.

School, every Thursday from 9 A.M. to 5 P.M.

Worcester State Hospital, at school board rooms, Worcester city hall, second Tuesday of each month, 5 first visits, 5 second visits.

No clinics were held in places outside the school during the summer vacations of the public schools.

After-care.

Total number of patients leaving school,	381
On visit,	342
Discharged,	7
Escaped,	32
Total number of patients on visit,	342
Total number of parole patients reporting,	24

Mental Hygiene.

Lectures by superintendent,	10
Clinics,	10

COMMITMENTS FOR OBSERVATION AND TEMPORARY CARE FOR THE WHOLE STATE.

The number of commitments for observation (under section 43, chapter 504, Acts of 1909) was 199 for the year. The period designated by the judges in the various cases was usually thirty days.

Of these cases, 51 were subsequently committed, 6 were recommitted for observation, 3 were readmitted under chapter 174, 102 were discharged, 12 were committed to other institutions, 12 were admitted voluntarily, 1 was transferred to another institution, 2 died, 1 escaped and 9 were remaining at the close of the year.

Under chapter 307 of the Acts of 1910, requiring that emergency cases which come into the care or protection of the police in Boston be taken to the Boston State Hospital for temporary care, and forbidding the use of prisons, jails or penal institutions for such persons, 393 were taken to the Psychopathic Department of the Boston State Hospital. Of these, 110 were subsequently regularly committed to the Boston State Hospital, 107 were committed to other institutions, 137 were discharged, 7 died, 3 were admitted voluntarily, 12 were committed for observation, 1 was readmitted under chapter 174 of the Acts of 1911, and 11 were returned to institutions. Five such cases were remaining at the close of the year.

There were 10 admissions under section 34, chapter 504 of the Acts of 1909, which provides for the apprehension of a patient before examination and commitment. Three of these were subsequently committed and 3 discharged, 1 was committed to another institution, and there were 3 remaining at the close of the year.

	ADMISSIONS UNDER —					
	Section 34, Chapter 504, Acts of 1909 (Apprehension of Alleged Insane Person).	Section 43, Chapter 504, Acts of 1909 (for Observation).	Chapter 307, Acts of 1909 (for Temporary Care, Boston Hospital).	Chapter 174, General Acts of 1915 (for Temporary Care).	Section 45, Chapter 504, Acts of 1909 (for Voluntary Care).	Section 42, Chapter 504, Acts of 1909 (for Care in Emergency).
Admitted during year,	10	199	393	1,827	765	48
Discharged,	3	102	137	605	507	5
Discharged to Immigration Commission.	-	-	-	19	-	-
On visit,	-	-	-	-	50	-
On escape,	-	1	-	-	-	-
Died,	-	2	7	38	14	-
Regularly committed,	3	51	110	650	35	25
Committed for observation,	-	6	12	51	-	1
Readmitted under chapter 174,	-	3	1	37	-	-
Admitted as emergency,	-	-	-	33	-	-
Admitted voluntarily,	-	12	3	94	-	1
Returned to institutions,	-	-	11	8	-	-
Transferred to other institutions,	-	1	-	-	-	-
Committed to other institutions,	1	12	107	263	6	16
Voluntary to other institutions,	-	-	-	-	-	-
Remaining Sept. 30, 1916,	3	9	5	29	153	-

Under chapter 174 of the General Acts of 1915, — being an amendment of chapter 395 of the Acts of 1911, allowing of the admission of patients for ten days for temporary care, instead of seven days, as formerly, — 1,827 cases were admitted, of whom 650 were subsequently committed, 263 were committed to other institutions, 51 were committed for observation, 605 were discharged, 94 were received under the voluntary status, 8 were returned to institutions, 33 were admitted as emergency cases, 37 were readmitted under chapter 174, 38 died, 19 were

discharged to Commissioner of Immigration, and 29 were remaining at the close of the year.

There were 48 emergency admissions under section 42, chapter 504, Acts of 1909, of whom 25 were regularly committed, 16 were committed to other institutions, 1 was committed for observation, 1 was admitted voluntarily, 5 were discharged, and there were none remaining on September 30.

Voluntary admissions numbered 765, of whom 41 were regularly committed, 507 were discharged, 50 allowed to go on visit, 14 died, and 153 were remaining at the close of the year.

It is to be noted with interest that during the year covered by the report there were 765 voluntary admissions, 1,827 under chapter 174, General Acts of 1915, and 393 under chapter 307, Acts of 1910, making a total of 2,985 patients who were admitted without any action of the court or judge or other very formal proceeding. Of these 2,985 cases thus admitted, 1,249 were discharged without commitment, 59 died before commitment, 97 signed voluntary requests, and 153 voluntary patients continued their stay in the voluntary status, no commitment being considered necessary, making a total of 1,558 persons who secured the benefits of treatment in our public or private hospitals for the insane without the formality of a procedure before a judge, which would have been attended with delays, legal exactions, semi-publicity and the stigma of having been pronounced insane, all of which was thus obviated, to the comfort and satisfaction of the patients and friends.

THE STABILITY OF SERVICE

in the institutions averages about the same as the previous year. There were 2.60 rotations of all employees, compared with 2.23 rotations the previous year; 2.87 in the nursing staff, compared with 2.46 the previous year. The maximum stability for the whole service was at the Gardner Colony, where there were only 1.08 rotations; and for the nursing staff, also at the Gardner Colony, where there were 1.05 rotations.

The average length of the interval between rotations of all employees was 4.69 months; of all nurses, 4.25 months; men nurses, 3.39 months; women, 5.10 months.

The average shortage of employees was 11 per cent.

Rotation in Service of Persons employed in State Institutions during the Fiscal Year ending Nov. 30, 1916.

INSTITUTIONS.	WARD SERVICE.				WHOLE SERVICE.			
	MEN.		WOMEN.		TOTALS.		Average Number of All Em- ployees.	Number Different Persons em- ployed.
	Average Number of Nurses.	Number Different Persons.	Ro- tations.	Average Number of Nurses.	Number Different Persons.	Ro- tations.		
The insane:—								
Worcester Hospital,	86	395	4.59	98	228	2.33	347	1,021
Taunton Hospital,	82	283	3.08	83	264	3.18	304	701
Northampton Hospital,	37	89	2.40	35	108	3.08	152	345
Danvers Hospital,	66	198	3.00	96	261	2.72	301	738
Westborough Hospital,	86	477	5.55	111	246	2.83	301	998
Boston Hospital, ¹	87	295	3.39	168	365	2.22	454	1,074
Grafton Hospital,	77	371	4.82	92	231	2.51	364	1,191
Medfield Hospital,	77	178	2.31	131	266	2.03	382	1,002
Foxborough Hospital,	21	58	2.76	16	48	3.00	102	252
Gardner Colony,	42	42	1.00	19	22	1.16	140	152
Totals,	661	2,356	3.56	849	2,039	2.40	2,886	7,474
Miscellaneous:—								
Monson Hospital,	51	192	3.76	54	145	2.68	202	583
School for the Feeble-minded at Wal- tham,	24	99	4.12	152	339	2.23	279	668
Wrentham School,	8	30	3.75	77	185	2.40	131	356
Totals,	83	321	3.87	283	669	2.36	612	1,607
Aggregates,	744	2,677	3.60	1,132	2,708	2.39	3,498	9,081

¹ Includes Psychopathic Department.

THE CAPACITY FOR PATIENTS

in all the institutions Dec. 1, 1916, was 16,785, compared with 16,436 the previous year, an increase of 349 beds. The whole number of patients in them was 17,629, compared with 17,287 the previous year, an increase of 342. Hence there is a deficiency of provision for 844 patients, or 9.40 per cent.

THE CAPACITY FOR THE INSANE

in State institutions Dec. 1, 1916, was 13,190, an increase of 210 beds. The whole number of patients in them was 14,001 as compared with 13,806 the previous year, an increase of 195. Hence there is a deficiency of provision for 811 patients, or 6.14 per cent.

There are at the present time buildings to accommodate 260 insane persons in process of construction. Additional provisions also for 260 feeble-minded have been granted by the Legislature.

Working Capacities of Institutions.

INSTITUTIONS.	MALES.		FEMALES.		TOTALS.	
	Dec. 1, 1916.	Increase for the Year.	Dec. 1, 1916.	Increase for the Year.	Dec. 1, 1916.	Increase for the Year.
The insane:—						
Worcester Hospital,	808	25	646	—	1,454	25
Taunton Hospital,	611	—	598	—	1,209	—
Northampton Hospital,	426	—	393	—	819	—
Danvers Hospital,	566	—	778	1	1,344	1
Westborough Hospital,	518	—	643	—	1,161	—
Boston Hospital,	657	2 ¹	747	—	1,404	2 ¹
Grafton Hospital,	875	78	870	97	1,745	175
Medfield Hospital,	637	—	905	—	1,542	—
Gardner Colony,	481	27	241	16 ¹	722	11
Foxborough Hospital,	199	—	100	—	299	—
Mental Wards, State Infirmary,	177	—	496	—	673	—
Bridgewater Hospital,	818	—	—	—	818	—
Totals,	6,773	128	6,417	82	13,190	210
Miscellaneous:—						
Monson Hospital (sane and insane),	547	1 ¹	420	—	967	1 ¹
School for the Feeble-minded at Waltham,	956	15	542	—	1,498	15
Wrentham School,	538	88	592	37	1,130	125
Totals,	2,041	102	1,554	37	3,595	139
Aggregates,	8,814	230	7,971	119	16,785	349

¹ Decrease.

Working Capacities of Institutions — Concluded.

INSTITUTIONS.	NUMBER OF PATIENTS IN INSTITUTIONS DEC. 1, 1916.			Increase for the Year.	EXCESS OF PATIENTS.				
	Males.	Females.	Totals.		Number of Males.	Number of Females.	TOTALS.		
							Number.	Percentage.	
The insane: —									
Worcester Hospital,	810	648	1,458	8 ¹	2	2	4	0.27	
Taunton Hospital,	634	621	1,255	2	23	23	46	3.80	
Northampton Hospital,	469	473	942	13	43	80	123	15.01	
Denvers Hospital,	660	857	1,517	39	94	79	173	12.87	
Westborough Hospital,	545	677	1,222	19 ¹	27	34	61	5.25	
Boston Hospital,	721	882	1,603	5	64	135	199	14.17	
Crafton Hospital,	785	903	1,688	52	90 ¹	33	57 ¹	3.26 ¹	
Medfield Hospital,	672	966	1,638	9	35	61	96	6.22	
Gardner Colony,	459	301	760	14	22 ¹	60	38	5.26	
Foxborough Hospital,	255	109	364	55	56	9	65	21.73	
Mental Wards, State Infirmary,	198	518	716	15	21	22	43	6.38	
Bridgewater Hospital,	838	—	838	18	20	—	20	2.44	
Totals,	7,046	6,955	14,001	195	273	538	811	6.14	
Miscellaneous: —									
Monson Hospital (sane and insane),	528	480	1,008	13 ¹	19 ¹	60	41	4.23	
School for the Feeble-minded at Waltham,	972	617	1,589	32 ¹	16	75	91	6.07 ¹	
Wrentham School,	426	605	1,031	192	112 ¹	13	99 ¹	8.76	
Totals,	1,926	1,702	3,628	147	115 ¹	148	33	.91	
Aggregates,	8,972	8,657	17,629	342	158	686	844	9.40	

¹ Decrease.

THE PUBLIC INSTITUTIONS.

WORCESTER STATE HOSPITAL.

Opened in January, 1833. Present capacity, 1,454; increase for the year, 25.

Valuation of the plant, per capita of capacity, \$1,517; real estate, \$1,392; personal, \$125.

Daily average number of patients under care, 1,505; in hospital, 1,455; in family care, 50; increase for the year, 50.

Number Oct. 1, 1916, 1,504; in hospital, 1,457; in family care, 47.

All commitments, 727; increase for the year, 228.

Commitments as insane, 669; increase for the year, 203.

First cases of insanity, 530; 79.22 per cent.

Voluntary admissions, 9.

Commitments as inebriate, 3.

Temporary-care admissions, 143.

First Cases of Insanity.

Native-born patients, 47.16 per cent.; mothers, 23.36 per cent.; fathers, 21.43 per cent.

Age sixty years or over, 23.26 per cent.

Residents in cities or large towns, 86.04 per cent.; country districts, 13.96 per cent.

Previous duration of insanity, under six months, 47.53 per cent.

Curable forms of insanity, 15.85 per cent.

Causes: congenital, 22.08 per cent.; hereditary, 11.32 per cent.; alcoholic, 22.65 per cent.; senility, 14.53 per cent.; coarse brain lesions, 14.91 per cent.; syphilis, 10.94 per cent.

Recoveries of the Insane.

Whole number, 29; 4.33 per cent. of commitments.

Recoveries of first cases of insanity, 22; 4.15 per cent. of first cases.

Recoveries in curable group A, 20; 23.81 per cent. of such curable cases.

Deaths of the Insane.

Whole number, 225; 10.49 per cent. of whole number of persons treated.

Curable forms of mental disease present in 5.33 per cent.; tuberculosis in 5.33 per cent.; senile insanity in 29.33 per cent.; general paralysis in 28.89 per cent.; coarse brain lesions in 25.78 per cent.

Finances.

Expenditures from maintenance funds, \$373,836; total receipts, \$51,511; being \$32,687 from private patients, \$16,960 from reimbursing patients, \$1,864 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$4.75; the same less repairs and improvements, \$4.58.

Weekly per capita cost of whole service, \$1.89; ward service, \$0.75.

One person employed for every 4.20 patients; 1 nurse for every 7.90 patients.

Average monthly wage for all persons employed, \$35.58; for nurses, \$26.61; men, \$28.53; women, \$24.91.

Extract from Trustees' Annual Report.

For many years the institution has owned a farm of some 130 acres in the town of Shrewsbury. At a distance from the center it has provided an ideal place for the hospital's swine and poultry. It is there that the non-milk producing herd is kept.

For a great many years no money has been expended at Hillside except for minor improvements and repairs. Last year, at the request of the State Board of Insanity, the Legislature appropriated the sum of \$20,000 for the construction of a building to house 50 male patients; this is rapidly nearing completion, and, when finished, 55 patients, besides employees, will be located there.

Extract from Superintendent's Annual Report.

There have been no cases of contagious disease among the patients, which is rather remarkable when we come to consider the large numbers admitted, and that by far the greater number come from the more congested centers of population. The sanitary condition of the institution is good. Pneumonia, heart disease and general paralysis have been the chief causes of death. . . .

The year has been an active one in our training course. The members of the school have been diligent and efficient, and I wish to commend

their good and capable work. The affiliation with the New York hospitals has added to the interest in the nursing course, and has done much to encourage our nurses and to retain them in the service. . . .

Considerable difficulty has been experienced in securing and retaining in the hospital service not only nurses and attendants but all classes of persons employed at the institution. The prevailing wage of the community has been so much at variance with the compensation offered for hospital service that I wonder it has been possible to find persons in numbers sufficient to conduct the affairs of the institution.

The therapeutic industrial work has been continued. Large numbers of patients have been interested in employing themselves and thus directing their minds to a contemplation of more normal thoughts and activities. Our products have been placed in several exhibitions in different parts of the country, where they have attracted favorable notice from the community. Our pottery work, done wholly by patients, has reached quite a high state of proficiency, many of the articles produced being justly entitled to consideration as works of art of no mean value. The conception under which this therapeutic work is undertaken rather precludes the turning out of large quantities of manufactured articles, as a great part of the effort is absorbed in the attempt to interest the apathetic and demented, particularly the re-education of the dementia præcox cases. It is my idea that the success of this work should be judged by the amount of good which has been done for the patients rather than by the numbers of bales of finished goods turned out. It is left for the regular manufacturing departments of the institution to turn out the routine products. . . .

The farming operations have again proved profitable, both in a financial way and in providing suitable healthful out-of-door occupation for the more robust of our male inmates. For a considerable time following the loss of our herd from the foot and mouth disease it was found necessary to buy a large part of our milk supply. During the summer we have been able to make good the numbers of our cattle, though it has been necessary to buy grade stock largely. Very good animals have been secured, however, and now practically all of the milk used here is produced on the place, a fact which is a cause for self-congratulation in these times of high and advancing milk prices.

TAUNTON STATE HOSPITAL.

Opened in April, 1854. Present capacity, 1,209.

Valuation of the plant, per capita of capacity, \$750; real estate, \$641; personal, \$109.

Daily average number of patients under care, 1,339; in hospital, 1,278; in family care, 61; increase for the year, 45.

Number Oct. 1, 1916, 1,323; in hospital, 1,265; in family care, 58.

All commitments, 536; increase for the year, 42.

Commitments as insane, 499; increase for the year, 28.

First cases of insanity, 400; 80.16 per cent.

Voluntary admissions, 9.

Commitments as inebriate, 1.

Temporary-care admissions, 137.

First Cases of Insanity.

Native-born patients, 55.56 per cent.; mothers, 30.38 per cent.; fathers, 30.11 per cent.

Age sixty years or over, 24.62 per cent.

Residents in cities or large towns, 62 per cent.; country districts, 38 per cent.

Previous duration of insanity, under six months, 55.05 per cent.

Curable forms of insanity, 4.25 per cent.

Causes: congenital, 6.25 per cent.; hereditary, 19 per cent.; alcoholic, 13.75 per cent.; senility, 12.25 per cent.; coarse brain lesions, 4 per cent.; syphilis, 7.25 per cent.

Recoveries of the Insane.

Whole number, 36; 7.21 per cent. of commitments.

Recoveries of first cases of insanity, 26; 6.50 per cent. of first cases.

Recoveries in curable group A, 14; 82.35 per cent. of such curable cases.

Deaths of the Insane.

Whole number, 170; 9.20 per cent. of whole number of persons treated.

Curable forms of mental disease present in 4.71 per cent.; tuberculosis in 10.59 per cent.; senile insanity in 30.59 per cent.; general paralysis in 21.18 per cent.; coarse brain lesions in 15.88 per cent.

Finances.

Expenditures from maintenance funds, \$350,988; total receipts, \$37,136; being \$20,291 from private patients, \$14,479 from reimbursing patients, \$2,366 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$5.01; the same less repairs and improvements, \$4.72.

Weekly per capita cost of whole service, \$1.88; ward service, \$0.75.

One person employed for every 4.21 patients; 1 nurse for every 7.77 patients.

Average monthly wage for all persons employed, \$35.98; for nurses, \$26.55; men, \$29.41; women, \$23.77.

Extract from Trustees' Annual Report.

The shortage of labor has been a serious factor here as elsewhere, and the plan for having women nurses on male wards, begun as an innovation with satisfactory result, has been continued and enlarged as a necessity. But in the equalization of salaries lies the hope of making this service so attractive that no department will meet the obstacle of labor shortage. There is no reason why the State should expect to pay less at Taunton than it does at any other like institution.

Extract from Superintendent's Annual Report.

In last year's report we called attention to certain subtle dangers that threatened nursing in general and our training schools in particular. These dangers are becoming more apparent daily. Already nurses' associations have practically bound themselves not to care for the sick for a lower rate than a certain specified rate per day or per week, thus branding themselves with the sordid stamp of mercenary commercialism; while in our own State an effort was made this past year to pass a bill that would have prevented all unregistered nurses, no matter how competent, from caring for the sick, and would, moreover, deprive all but the well-to-do of the service of a nurse, or degrade them to the level of paupers. An effort to pass a similar bill will be made this coming winter, and should be strongly opposed by all who have the best interests of nursing at heart. The growing tendency, moreover, to unnecessarily raise training school requirements, and to unduly multiply the subjects taught, thereby rendering it impossible for more than a small per cent. of the number seeking instruction to graduate, and at the same time encouraging a lower grade of instruction to train so-called hospital attendants, seems to us most unwise. The inevitable result will be to weaken our training schools, lower the standard of care in our hospitals, and turn us backward instead of assisting us to advance. . . .

The employment of women nurses on the men's wards has been extended with good results. Of the 58 day nurses 36 are women; and of the 16 night nurses 8 are women. In fact, we have been obliged to employ women on the men's wards for the past year to a greater extent than we otherwise should, perhaps, were it not for the difficulty, and, indeed, impossibility of procuring a sufficient number of men.

Mental clinics have been held during the past year in Taunton, Fall River and New Bedford. At the present time a clinic for adults is held

weekly in Taunton, and monthly in Fall River and New Bedford; children's clinics are also held monthly in Fall River and New Bedford, in co-operation with the Massachusetts School for the Feeble-minded. In addition to the above, at the request of the school authorities of Taunton, a four days' clinic was held last June in this city, during which nearly 50 children were examined. The greatest credit is due Dr. Fernald, superintendent of the Massachusetts School for the Feeble-minded, for his zeal and self-sacrificing willingness to co-operate in this important work.

Six hundred and eighty-five patients attended the 14 picnics held for their recreation during the summer; of these, two were held at the Lovering Colony and were attended by the whole population of both nurses and patients; two were for the most disturbed patients and were attended by 14 each; the remaining 10 were attended by the main body of patients, at which baseball was, as usual, the principal diversion. During the cooler months, as in previous years, two evenings of each week were devoted to dancing and other entertainments in the chapel, and weekly card parties were held on East and West Godding No. 9.

NORTHAMPTON STATE HOSPITAL.

Opened in August, 1858. Present capacity, 819.

Valuation of the plant, per capita of capacity, \$1,310; real estate, \$1,142; personal, \$168.

Daily average number of patients under care, 970; in hospital, 936; in family care, 34; increase for the year, 26.

Number Oct. 1, 1916, 1,000; in hospital, 963; in family care, 37.

All commitments, 418; increase for the year, 19.

Commitments as insane, 391; increase for the year, 7.

First cases of insanity, 306; 78.26 per cent.

Voluntary admissions, 30.

Commitments as inebriate, none.

Temporary-care admissions, 76.

First Cases of Insanity.

Native-born patients, 57.05 per cent.; mothers, 33.77 per cent.; fathers, 34.11 per cent.

Age sixty years or over, 21.31 per cent.

Residents in cities or large towns, 60.46 per cent.; country districts, 39.54 per cent.

Previous duration of insanity, under six months, 42.57 per cent.

Curable forms of insanity, 31.05 per cent.

Causes: congenital, 16.34 per cent.; hereditary, 18.96 per cent.; alcoholic, 20.27 per cent.; senility, 10.46 per cent.; coarse brain lesions, 9.15 per cent.; syphilis, 5.88 per cent.

Recoveries of the Insane.

Whole number, 61; 15.60 per cent. of commitments.

Recoveries of first cases of insanity, 43; 14.05 per cent. of first cases.

Recoveries in curable group A, 41; 43.16 per cent. of such curable cases.

Deaths of the Insane.

Whole number, 107; 7.75 per cent. of whole number of persons treated.

Curable forms of mental disease present in 11.21 per cent.; tuberculosis in .93 per cent.; senile insanity in 29.91 per cent.; general paralysis in 18.69 per cent.; coarse brain lesions in 31.78 per cent.

Finances.

Expenditures from maintenance funds, \$221,030; total receipts, \$56,192; being \$36,625 from private patients, \$17,386 from reimbursing patients, \$2,181 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$4.31; the same less repairs and improvements, \$4.16.

Weekly per capita cost of whole service, \$1.70; ward service, \$0.62.

One person employed for every 6.21 patients; 1 nurse for every 13.01 patients.

Average monthly wage for all persons employed, \$47.47; for nurses, \$36.81; men, \$39.80; women, \$33.58.

Extract from Trustees' Annual Report.

In planning for the future of the institution we advise that attention be given to a proposal frequently discussed by us of establishing a reception hospital as a branch of our institution somewhere nearer the center of population of our district than Northampton. This might well be not only a hospital for the reception and temporary detention of patients committed to the hospital here, but a place for the examination and treatment of nervous and mental cases that need never come to the hospital at Northampton.

Extract from Superintendent's Annual Report.

Our social service and out-patient work as outlined in the annual reports of 1910 and the following years has continued with increasing activity. The ready response of the public and the expressions of grateful appreciation demonstrate the usefulness of this branch of our work. The past year has been a busy one. Clinics have been held every week by one or more of the members of the medical staff; at Springfield these are now held at the Springfield Hospital on the first and third Wednesdays of each month; at Greenfield in the Franklin County Hospital on the second Monday of the month; and at Pittsfield at the House of Mercy on the fourth Thursday of the month. The management of each of these institutions has been very helpful to us.

As the public learns of these, it makes more use of them. There have been 318 patients seen and advised at these clinics, of whom 300 came for the first time; 45 were referred by physicians, 2 by other hospitals, 47 by charitable associations, 7 by courts, 7 by schools, 21 came of their own initiative, 61 cases discharged from the hospital came to report, and relatives of 112 patients in the hospital came to inquire about them, to get acquainted with the hospital officers, and to send some message or gift to the patients.

Commitment papers were signed by some member of the staff, following examination of the patient in 23 cases, for commitment to the schools for the feeble-minded at Waverley and Wrentham. The social worker made 239 visits in the after-care work, and investigated for other hospitals a number of cases residing in our district. Dr. Whitney also saw 28 patients in consultation with other physicians at the request of the family of the patient or of some charitable association. In these cases she was of service in advising commitment in some and home treatment in others.

More patients than ever, 43 in number, have been in family care the past year, and the daily average number, 34, was 7 larger than the year before.

Our training school is being reorganized to conform to a uniform curriculum adopted by all the State hospitals. The course has been lengthened, and affiliation has been or is being arranged with a general hospital, whereby our training may be supplemented, during the second or intermediate year, by experience in the things we lack. The course is planned to qualify nurses to pass the State examination for registration.

A training course of one year for attendants is to be required of all who do not care to take the course for nurses.

Use in liberal quantities has been made of the two great remedies, work and play, as written about in former annual reports. Record of them is made here lest such important matters escape public notice. Recoveries are hastened, and contentment and well-being of patients are promoted more by these than by any other remedial agency known to me.

The year has been a prosperous one on the farm. We raised all the vegetables, milk, pork and considerable beef used in the institution. Our herd of cows is in excellent condition. All have been tested frequently for evidences of tuberculosis, and all but a few are registered. We have purchased no cows in late years, but have raised all the calves eligible for registry. In this way we are able to make a selection of the most valuable animals for our herd. During the past year the milk production has averaged more than 900 quarts daily, and the cows have averaged to yield a little more than 14 quarts a day.

As in former years, some waste land has been reclaimed by clearing it of shrubs and stones and by underdraining it. New fences have been built and roads kept in repair.

DANVERS STATE HOSPITAL.

Opened in May, 1878. Present capacity, 1,344; increase for the year, 1.

Valuation of the plant, per capita of capacity, \$1,639; real estate, \$1,497; personal, \$142.

Daily average number of patients under care, 1,522; in hospital, 1,502; in family care, 20; increase for the year, 25.

Number Oct. 1, 1916, 1,539; in hospital, 1,516; in family care, 23.

All commitments, 716; increase for the year, 92.

Commitments as insane, 703; increase for the year, 96.

First cases of insanity, 532; 75.68 per cent.

Voluntary admissions, 34.

Commitments as inebriate, none.

Temporary-care admissions, 182.

First Cases of Insanity.

Native-born patients, 60.53 per cent.; mothers, 35.64 per cent.; fathers, 33.47 per cent.

Age sixty years or over, 20.68 per cent.

Residents in cities or large towns, 85.34 per cent.; country districts, 14.66 per cent.

Previous duration of insanity, under six months, 44.77 per cent.

Curable forms of insanity, 22.93 per cent.

Causes: congenital, 7.71 per cent.; hereditary, 14.28 per cent.; alcoholic, 16.73 per cent.; senility, 5.45 per cent.; coarse brain lesions, 11.09 per cent.; syphilis, 11.47 per cent.

Recoveries of the Insane.

Whole number, 50; 7.11 per cent. of commitments.

Recoveries of first cases of insanity, 33; 6.20 per cent. of first cases.

Recoveries in curable group A, 31; 25.41 per cent. of such curable cases.

Deaths of the Insane.

Whole number, 211; 9.34 per cent. of whole number of persons treated.

Curable forms of mental disease present in 13.27 per cent.; tuberculosis in 6.63 per cent.; senile insanity in 13.27 per cent.; general paralysis in 31.28 per cent.; coarse brain lesions in 42.18 per cent.

Finances.

Expenditures from maintenance funds, \$383,191; total receipts, \$62,026; being \$35,694 from private patients, \$23,499 from reimbursing patients, \$2,833 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$4.79; the same less repairs and improvements, \$4.39.

Weekly per capita cost of whole service, \$1.87; ward service, \$0.69.

One person employed for every 5.08 patients; 1 nurse for every 9.29 patients.

Average monthly wage for all persons employed, \$41.29; for nurses, \$28.50; men, \$31.48; women, \$26.48.

*Extract from Trustees' Annual Report.**Changes in Officers.*

Dr. George M. Kline, superintendent, resigned on Aug. 11, 1916, to accept the position of director of the Massachusetts Commission on Mental Diseases. Dr. Kline was appointed superintendent in 1912. His administration was singularly able and skillful. Under his direction many important innovations were inaugurated, which have resulted in more active and efficient service; notable improvements in the plant were made; and well-conceived provisions for bringing the hospital into closer touch with the public it served were put into effect.

Dr. John B. Macdonald, who became assistant superintendent in 1912, was selected by the trustees to succeed Dr. Kline in the office of superintendent. His appointment was confirmed by the Governor and Council on September 20.

The year just closed has been a busy and arduous one. With a larger admission rate than in any previous year, and a working force much smaller than is normally required, the responsibilities and labors falling upon officers and employees have been greatly increased. The shortage of help, due to the advantages and attractions offered in other fields of industry in the community, against which we are not able to compete, has been throughout a perplexing, and frequently a most serious, problem.

Extract from Superintendent's Annual Report.

The Shortage of Help.

The change of administration towards the close of the year, and the vacancy in one or two important offices by resignations, has added to the difficulties and responsibilities of executive duties. Throughout the year the shortage of help in all departments has seriously handicapped the work of the hospital. An increased admission rate, a great increase in total numbers treated, and a decreasing force of workers combined to form a problem of management perplexing in the extreme. The scarcity of help willing to accept positions at the wages offered has seemed to have occasioned a competition among institutions, where one has been obliged to bid against the other, according to their means. Restlessness, discontent and frequent change, never more in evidence, have been the natural consequence, the inevitable tendency of which is to lower efficiency and to weaken an organization. The need of a standardization of salaries has seldom forced itself so strongly upon attention. The necessity of an adjustment of wage to meet the demands of a labor market offering superior attractions in the form of higher compensation and easier conditions is imperative if the institution shall aim to obtain its force of workers from a more promising source of supply than the drifting and least desirable class of applicants at employment agencies.

Taking actual figures for the year, we find an average monthly shortage of 20 per cent. of employees in all departments. Of attendants and nurses on the male ward service, the average monthly shortage was 10 per cent. of the number normally required; on the female service, 15.75 per cent.; and of farm employees, 65 per cent. In one department, with approximately 250 patients under care, ordinarily requiring the service of 21 nurses, the daily average for the month of September was slightly over 8 nurses; for October, somewhat better than 12; and for November, a fraction over 10. The greatness of this deficiency cannot be explained on the basis of unfavorable local conditions. The fact is that the inducements are much less attractive than those offered in other fields of industry, where the demand continues far heavier than the supply. No means of persuasion will avail to remedy this condition unless the advantages to those whose service is required are made evident in a wage rate relatively equal to that prevailing in the community.

Activities of the Social Service Department.

The district served by the Danvers State Hospital is large, including thirty cities and towns. The scope of duties is constantly widening. The summary of the year's work indicates in a general way the demands of the service, and emphasizes the need of additional workers. Indeed, as has been pointed out in last year's report, five social workers could be used advantageously in an institution of this size and type, if the most is to be made of our opportunities. The importance of the service can only be justly appreciated by those who have been in position to watch its development and to judge the results. It fulfills a long-felt humanitarian, educational and sociologic need. Of almost vital interest to the hospital, it provides the reconciling touch which brings the hospital into hand-clasps with the public it serves. Social service in our State hospital is an expression of the best social thought and purpose of to-day, and this department is worthy of all the development and the supporting appropriations which it requires.

The training school for nurses is in affiliation with the Bellevue and Allied Hospitals of New York. Classes of six undergraduates take a nine months' special course in New York. It is planned to extend the course to ten months, and an effort will be made to enter the school upon the New York registry, in order that graduates who have completed the special course may be eligible for certificates as registered nurses in New York.

WESTBOROUGH STATE HOSPITAL.

Opened in December, 1886. Present capacity, 1,161.

Valuation of the plant, per capita of capacity, \$873; real estate, \$750; personal, \$123.

Daily average number of patients under care, 1,332; in hospital, 1,271; in family care, 61; increase for the year, 73.

Number Oct. 1, 1916, 1,280; in hospital, 1,226; in family care, 54.

All commitments, 606; increase for the year, 40.

Commitments as insane, 473; increase for the year, 46.

First cases of insanity, 342; 72.30 per cent.

Voluntary admissions, 111.

Commitments as inebriate, 62.

Temporary-care admissions, 70.

First Cases of Insanity.

Native-born patients, 62.35 per cent.; mothers, 37.66 per cent.; fathers, 35.53 per cent.

Age sixty years or over, 21.70 per cent.

Residents in cities or large towns, 71.64 per cent.; country districts, 28.36 per cent.

Previous duration of insanity, under six months, 44.93 per cent.

Curable forms of insanity, 19.01 per cent.

Causes: congenital, 1.75 per cent.; hereditary, 12.28 per cent.; alcoholic, 8.19 per cent.; senility, 9.94 per cent.; coarse brain lesions, 5.56 per cent.; syphilis, 7.60 per cent.

Recoveries of the Insane.

Whole number, 74; 15.64 per cent. of commitments.

Recoveries of first cases of insanity, 43; 12.57 per cent. of first cases.

Recoveries in curable group A, 25; 38.46 per cent. of such curable cases.

Deaths of the Insane.

Whole number, 139; 7.92 per cent. of whole number of persons treated.

Curable forms of mental disease present in 11.51 per cent.; tuberculosis in 2.88 per cent.; senile insanity in 27.34 per cent.; general paralysis in 19.42 per cent.; coarse brain lesions in 17.99 per cent.

Finances.

Expenditures from maintenance funds, \$355,511; total receipts, \$75,807; being \$57,697 from private patients, \$15,850 from reimbursing patients, \$2,260 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$5.12; the same less repairs and improvements, \$4.97.

Weekly per capita cost of whole service, \$2.22; ward service, \$0.97.

One person employed for every 3.74 patients; 1 nurse for every 6.49 patients.

Average monthly wage for all persons employed, \$37.78; for nurses, \$28.37; men, \$32.20; women, \$25.37.

Extract from Superintendent's Annual Report.

We are not alone in finding it difficult to get competent employees, or, in fact, any employees. Apparently it is a universal condition. Although farm operations have suffered even to being obliged to have some teams stand in the stable unused for a day or two at a time, the male ward service has suffered more than any other department. The condition

may be briefly shown by the fact that to keep an average of 84.5 on duty required the employing of 372 individuals. Over 82 per cent. remained in the service less than three months.

Medical Activities.

There has been no change in our methods of previous years, but with increased experience along certain lines have come increased facilities and results.

Our industrial work has been hampered by lack of help, making it necessary to close two rooms from two to three months, but they are now open again, and we hope to soon open rooms for the female ward industries in the renovated kitchen of the Talbot Building, the cooking of the psychiatric group now being done at the main kitchen.

We have continued the out-patient clinics at the Massachusetts Homœopathic Hospital with increasing satisfaction, and the field worker's investigations of home environments and history of patients has more than fulfilled our expectations when we first started the work in 1912.

We regret that we have not seen our way clear to establish another open ward this year. We still have 11 such out of a total of 48.

We have continued giving as many patients as possible some freedom in the way of parole privileges on the grounds, there now being 342 individuals enjoying this opportunity.

While we use our best judgment to grant this privilege only to trustworthy patients, we realize that in some cases there is a risk of accidents or escapes, but we believe that the benefit to the many justifies the possible unfortunate results to the few, and we should be sorry to find ourselves curtailing the small approach to the normal life for so many of our patients.

The dentistry has been done as in former years by Dr. Brigham of Westborough, who reports the following work done:—

Amalgam fillings,	102
Cement fillings,	73
Synthetic porcelain fillings,	16
Teeth extracted,	402
Teeth treated,	46
Teeth cleaned,	69
New sets of teeth made,	19
Sets of teeth repaired,	19
New bridge work,	6
Crowns,	6

BOSTON STATE HOSPITAL.

Opened in December, 1839. Present capacity, 1,404; decrease for the year, 2.

Valuation of the plant, per capita of capacity, \$2,116; real estate, \$2,016; personal, \$100.

Daily average number of patients under care, 1,616; in hospital, 1,603 (insane and voluntary sane, 1,561; temporary care, 42); in family care, 13; increase for the year, 81.

Number, Oct. 1, 1916, 1,622; in hospital, 1,614 (insane and voluntary sane, 1,584; temporary care, 30); in family care, 8.

All commitments exclusive of temporary care, 919; decrease for the year, 398.

Commitments as insane, 868; decrease for the year, 369.

First cases of insanity, 688; 79.26 per cent.

Voluntary admissions, 317.

Commitments as inebriate, none.

Temporary-care admissions, 1,666.

First Cases of Insanity.

Native-born patients, 59.65 per cent.; mothers, 29.07 per cent.; fathers, 28.96 per cent.

Age sixty years or over, 19.65 per cent.

Residents in cities or large towns, 97.82 per cent.; country districts, 2.18 per cent.

Previous duration of insanity under six months, 51.79 per cent.

Curable forms of insanity, 20.49 per cent.

Causes: congenital, 2.18 per cent.; hereditary, 12.50 per cent.; alcoholic, 16.57 per cent.; senility, 16.57 per cent.; coarse brain lesions, 18.02 per cent.; syphilis, 13.52 per cent.

Recoveries of the Insane.

Whole number, 122; 14.06 per cent. of commitments.

Recoveries of first cases of insanity, 89; 12.94 per cent. of first cases.

Recoveries in curable group A, 75; 53.19 per cent. of such curable cases.

Deaths of the Insane.

Whole number, 229; 9.35 per cent. of whole number of persons treated.

Curable forms of mental disease present in 11.35 per cent.; tuberculosis in 10.04 per cent.; senile insanity in 23.14 per cent.; general paralysis in 33.62 per cent.; coarse brain lesions in 35.37 per cent.

Finances.

Expenditures from maintenance funds, \$488,450; total receipts, \$52,497; being \$25,456 from private patients, \$19,893 from reimbursing patients, \$7,148 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$5.71; the same less repairs and improvements, \$5.54.

Weekly per capita cost of whole service, \$2.62; ward service, \$1.09.

One person employed for every 3.54 patients; 1 nurse for every 6.32 patients.

Average monthly wage for all persons employed, \$40.66; for nurses, \$30.10; men, \$32.88; women, \$28.65.

*Extract from Trustees' Annual Report.**The Nursing Staff.*

In common with most of the institutions there has been a deplorable deficiency in the available number of nurses and attendants, a deficiency averaging 15 for the year, and reaching a maximum of 32 in the summer. Without a sufficient number of good nurses not only are the safety and comfort of our patients endangered, but the efforts at improving their mental condition are thwarted. Higher wages ought to be paid, and the living conditions should be improved, so that this service may be made a reasonably attractive and permanent vocation in comparison with other forms of labor, and not, as is the case all too frequently, a temporary makeshift until some other opportunity is available.

The extension of the time of temporary care to ten days has proved to be of great advantage. By an act of the last General Court a member of the medical staff of the hospital may serve as an examining physician for a commitment certificate if designated for this purpose by the Commission.

Extract from Superintendent's Annual Report.

The medical service is increasingly active, as noted last year, and is in need at all times of a full complement of officers in order to do its work in a thorough fashion. There are new standards in diagnosis and treatment, and also added requirements in the field of prophylaxis, while psychiatry proper makes endless demands on the time and energy of the physician, quite apart from the large amount of attention that must be given to patients' visitors, to ward management, office duties and emergency calls. Our staff, I am pleased to say, shows unflinching interest in all these exacting duties.

The staff meetings bring to discussion numerous interesting and important problems, and not only stimulate study, but ensure to the individ-

ual patient the maximum of our resources for his special needs. There were held during the year 173 of these meetings, at which 228 cases were presented, and in addition 12 laboratory meetings for demonstration by the pathologist of conditions found post mortem, and instructive presentation of material from the literature and results of various research activities in our own laboratories or in others. . . .

Dr. Irving J. Walker has continued his service as attending surgeon, giving our patients the benefit of the best surgical skill in the many emergencies which arise, and also relieving many conditions which would otherwise give lasting trouble. . . .

Dr. Walter J. Whelan's report of the dental work shows that our patients have need of the constant attendance of a dentist, and it is hoped that we may be able to extend the service to full time instead of two half days a week, as at present.

The report of the dental work for the year 1916 is as follows: —

Operative: —

Treatments: —

Of the teeth,	280
Prophylactic,	265

Fillings: —

Amalgam,	61
Cement,	57
Gutta-percha,	64
Silicate,	3
Fillings removed,	4

Extractions,	228
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Anæsthesia: —

General,	9
Local,	116
Alveolar abscesses,	24
Alveolus, sinus of,	2
Fractured jaw,	1
Pyorrhœa,	22
Examinations, miscellaneous,	47

Prosthetic dentistry: —

Plates,	6
Crowns,	2
Bridges,	4
Plates, repaired,	15
Bridges and crowns removed,	6
Bridges and crowns replaced,	8

Social Service and Family Care.

Our efforts in this department of the hospital's work have continued along the lines previously laid down. After-care supervision is given for a period of six months to practically all patients discharged, and assistance rendered in various ways, including help in finding employment in a few cases. In addition to this routine service the social worker is able to help the physicians very materially by attending to many miscellaneous matters relating to the patients' affairs, which can be done more satisfactorily

through personal visit than by correspondence. During the year ending July 1, the third year of the social service, 249 cases were handled, involving 401 visits to homes, agencies, etc.

Patients boarded by the hospital in family care are also under the supervision of the social worker, and this group has demanded approximately one-third of her time and attention, receiving 231 visits during the year. We have not succeeded in boarding out as many patients as we hoped to place; in fact, we have only 8 in family care at the end of the year, while we had 10 at its beginning. As noted by the visitor in her report, this is due to the high cost of living and the inadequacy of our authorized rate of board under existing conditions.

Recreation and Employment of Patients.

The purchase of a motion-picture apparatus, using non-inflammable films, has enabled us to give our patients the pleasure and the benefit of this most popular form of entertainment. Each set of films is shown three times to different groups, including some who could not leave the wards and go to the recreation hall. Aside from this new feature our entertainment program consists as before of occasional concerts and illustrated lectures, some donated by friends and some paid for by the hospital, of a dance every fortnight except during the summer, and of various smaller gatherings in the wards for social games and refreshments. We have three pool tables, four pianos, one melodeon and two graphophones for the wards, so that a good many of the corners are brightened, but it would be well if the equipment for music could be doubled.

A variety of interesting occupations is provided, as for several years past, and much attention is paid to this as a means of treatment. Three men and three women instructors devote their whole time to the instruction and training of patients both in the industrial rooms and in the wards. During the past year the manufacture of shoes was begun, additional looms were installed for weaving cloth, and the stocking industry was extended. Additional room and more equipment would enable us to do more than is now possible, with benefit to the patients and with profit to the State. . . .

Extract from Director's Annual Report (Psychopathic Department).

The hospital was established, under the provisions of chapter 470 of the Acts of 1909, as a hospital for the first care and observation of mental patients, and the treatment of acute and curable mental disease. In compliance with said act the trustees of the Boston State Hospital erected, furnished and equipped buildings to accommodate 100 patients; the hospital at present operates 110 beds, so that the population may remain approximately 100 and still allow for emergencies.

The enabling act called for the establishment, in addition to the requirements of an out-patient department, of treatment rooms and laboratories for scientific research as to the nature, causes and results of insanity.

That portion of the State Board of Insanity's general appropriation (\$2,500), which, since 1909, has been devoted to investigation of the nature, causes, treatment and results of insanity, and the publication of such investigations, was raised during 1915 to \$5,000. The additional sum has been used for purposes of special investigation into the diagnosis and treatment of neurosyphilis, including general paresis, and other forms of brain and cord syphilis with mental symptoms.

The director of the hospital, since 1909, has been an officer of the State Board of Insanity, and has continued with the Commission on Mental Diseases to have the title of pathologist. The duties of the pathologist to the Commission consist of supervision of the clinical, pathological and research work of the various institutions in charge of the Commission. The plan by which the former State Board of Insanity resumed payment of the salary of the director has been continued.

The internal economy of the institution has continued to improve under the arrangement by which an administrator, Dr. E. H. Cohoon, has been in charge. The executive service, charged with the management of the external relations of the hospitals, has been continued and expanded so that the general relations of administration to medicine in the psychopathic hospital at the present time closely resemble those obtaining in general hospitals like the Peter Bent Brigham Hospital. These developments have gone far toward rounding into shape the new conception of a psychopathic hospital as distinct from pre-existent types of hospitals for mental disease. . . .

The extension of the psychopathic hospital grade of service throughout the State is a matter under serious contemplation by the Commission on Mental Diseases. The next center for the establishment of this grade of service, as now contemplated, is the western part of the State, centering in the city of Worcester. On account of these proposals, Section II., on "Problems of Hospital Management," has been devoted in this year's report more to the general features of psychopathic hospital grade of service than to the details of managements which are now reasonably well established. . . .

II. *Problems of Hospital Management.*

The Psychopathic Hospital in Boston is an institution of new type in America. The hospital approaches the ideal of Griesinger in his conception of the *Stadtsyl* in 1868. Abundant traces of the modeling of our institution after the plan of the Psychiatric Clinic in Munich are found, both in externals and in the essentials of our institution. The institution is not a modified or sublimated form of receiving ward for a great district hospital. The great district hospital, of which the psychopathic hospital is a department, has, in point of fact, its own receiving ward planned upon proper modern lines, and is adequately equipped for the reception of insane persons committed to the institution by the operations of the ordinary probate court processes. The psychopathic hospital, on the other hand, is an institution which does not receive cases committed by the probate court processes. The first requirement in understanding the psychopathic hospital's relation to the community is an understanding that the hospital is not built for the reception of medicolegally insane persons who have been determined to be insane upon the assurances of two qualified physicians. It is true that all our patients are admitted under some form of law, but very few of them are admitted by court processes,

and those few are sent to us for highly special determinations which the large staff and special equipments of the hospital are enabled to make more quickly and effectively than the State institutions for the great group of ordinary committed cases. Preliminary to the establishment of institutions like the psychopathic hospital in other States, it is necessary that laws should be enacted in these other States along the line of the Massachusetts laws for voluntary admissions and for temporary care.

The psychopathic hospital, then, represents a type of institution new in America, and only in part paralleled by its solitary predecessor in the general field, namely, the psychopathic ward of the hospital of the University of Michigan, at Ann Arbor. These two institutions, together with the psychopathic ward of Bellevue and the allied hospitals in New York City, remain the only institutions of great range built on the model of the *Stadtsyl* of Griesinger. These institutions are public and financed out of public funds. The Boston and New York psychopathic institutions deal with metropolitan district problems, and do not select their material as does, to a large extent, the Ann Arbor institution. The Boston and Ann Arbor institutions have important teaching relations in medical schools, and important research functions through their laboratory equipment and force. All three institutions take an important part in the public practice of psychiatry in their communities. About them all will doubtless develop in the long run those social service relations which we have developed in Boston to the best of our ability with the funds assigned. In short, the public aspects and relations of the psychopathic hospital of the Boston type are the most prominent and important of all the relations of the hospital. The ideal aim is the drainage of a district of all its special psychopathic problems not otherwise covered by pre-existing public and private agencies.

Many of our visitors, particularly from the middle and far western States, point their inquiries in the direction how far psychopathic clinics of this type ought to be related to their State university medical schools and departments of psychology and sociology. But even in Boston the university relations of the hospital, though close and important, were not the reasons for the establishment of this hospital, nor would they be indispensable in future hospitals of the sort. The somewhat intimate relations between the Psychopathic Hospital in Boston and the municipal court, the juvenile court, the Prison Commission, Industrial Accident Board, the Immigration Bureau, and a variety of semipublic social agencies, are the primary relations of the institution taken as a unit in public service. It is here that our experience is of most service to the country at large, as well as to our own community. The psychopathic hospital grade of service is coming to be recognized locally as a thing distinct from the district hospital grade of service. It is not that this psychopathic hospital service is necessarily superior to district hospital service. The psychopathic hospital service is qualitatively different from that of the district hospitals. Whereas district hospitals serve the insane (in the medicolegal sense of committed cases), and, to a limited extent, the few voluntary and temporary-care cases which the community is yet willing to submit thereto, the psychopathic hospital serves the mentally sick or mentally defective in a far broader sense than the statutory definition of insanity would allow.

It is of note that the psychopathic hospital type of service is accepted on all hands in the metropolitan district as now indispensable. Authorities in various allied fields of public service constantly make the remark that no one understands how we could formerly have got on without a psychopathic hospital. Tremendous pressure is brought to bear to bring a variety of cases from outside the metropolitan district into the psychopathic hospital, and the Commission on Mental Diseases has very liberally permitted the hospital to receive special cases from outside the district. The pressure is becoming so great, however, and the appreciation of the psychopathic hospital grade of service is such that no doubt, as above mentioned, an extension of this service to the western part of Massachusetts is only a matter of time and appropriations.

GRAFTON STATE HOSPITAL.¹

Opened in October, 1877. Present capacity, 1,745; increase for the year, 175.

Valuation of the plant, per capita of capacity, \$1,196; real estate, \$1,111; personal, \$85.

Daily average number of patients under care, 1,670; in hospital, 1,637; in family care, 33; increase for the year, 211.

Number Oct. 1, 1916, 1,750; in hospital, 1,721; in family care, 29.

Commitments as insane, 47.

First cases of insanity, 38; 80.85 per cent.

Voluntary admissions, none.

Commitments as inebriate, none.

Temporary-care admissions, none.

Deaths of the Insane.

Whole number, 119; 6.13 per cent. of whole number of persons treated.

Curable forms of mental disease present in 5.04 per cent.; tuberculosis in 26.05 per cent.; general paralysis in 2.52 per cent.

Finances.

Expenditures from maintenance funds, \$401,784; total receipts, \$14,999; being \$1,344 from private patients, \$11,228 from reimbursing patients, \$2,427 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$4.55; the same less repairs and improvements, \$4.37.

Weekly per capita cost of whole service, \$1.74; ward service, \$0.62.

One person employed for every 4.54 patients; 1 nurse for every 9.81 patients.

Average monthly wage for all persons employed, \$35.10; for nurses, \$26.90; men, \$28.34; women, \$25.69.

Extract from Trustees' Annual Report.

The vacancy created by the resignation of Dr. H. Louis Stick, superintendent of the hospital, was filled by the appointment on March 22, 1916, of Dr. James V. May of Albany, chairman and medical member of the

¹ Formerly Worcester State Asylum.

New York State Hospital Commission. Dr. May was connected with the New York State hospital service for fourteen years, and had five years' experience in the management of the hospitals of that State.

Section 2 of chapter 679 of the Acts of 1912, as amended by chapter 456 of the Acts of 1914, and by chapter 170 of the General Acts of 1915, authorizing the Board of Trustees to dispose of the property of the Grafton State Hospital on Summer Street, Worcester, and requiring the removal of the patients from that building, was repealed by chapter 283 of the General Acts of 1916.

In accordance with the policy of developing the institution at Grafton, as provided for by various legislative enactments, the Board has removed the administrative offices of the institution from the buildings on Summer Street to the Grafton Department of the Hospital, and the offices of the superintendent, treasurer, steward, etc., are now located in the new administration building at that place.

The storerooms have also been removed from Summer Street to Grafton, and the hospital supplies are now being issued from the store building at Grafton, which has been unoccupied heretofore. The Board has felt that it was unwise to issue the supplies of the institution from the Worcester Department, which accommodated less than 600 patients, while there are now nearly 1,200 at Grafton.

The laundry work of the Grafton Department is now being done in the laundry building at that place instead of being brought to Worcester, as has been done for many years.

Of the ten buildings which were unoccupied on May 1, 1916, seven are now in use, including the following: the administration building, the officers' cottage, the Willows Nurses' Home, the carpenter shop, the storehouse, the Elms E building, and the Oaks D building. Some of these buildings have been completed and unused for several years. The remaining three, which are the Oaks Service, the Elms Service and the Elms B buildings, will be occupied within the next few months.

In January the Board had a census taken of all tubercular patients, and were informed that there were 21 incipient and 31 semi-active cases in the institution. The superintendent was instructed to place all tubercular patients in buildings in Grafton where they would be isolated and where they could receive the care and diet that tubercular patients should receive. Such arrangements were made for their special treatment, the men being transferred to Elms C and the women to Pines A.

Arrangements have been made to care for all of the epileptics as well as the noisy, disturbed and violent class of patients at Grafton instead of in the Summer Street buildings. It is the policy of the Board to keep only such patients in the Summer Street building as will prove to be unobjectionable in a city community.

Extract from Superintendent's Annual Report.

The general health of the hospital population during the year was good. There were numerous cases of influenza and tonsillitis during the winter, and occasional cases of dysentery at Grafton during the summer. Several patients sustained fractures resulting from falls. One fracture of the femur in a patient suffering from general paresis made an amputation necessary. One patient at the Elms Group, who had exhibited no previous suicidal tendencies, succeeded in eluding the vigilance of the employees in charge of a working party long enough to hang himself from the limb of a tree. Although artificial respiration was applied for about one hour he could not be resuscitated.

The death rate for the year, as based on the whole number of cases under treatment, was 6.09 per cent., and based on the average daily population, 7.01 per cent.

Employees.

There have been numerous changes in the force of employees during the year. There were 357 persons employed at the institution on Nov. 30, 1916. The changes in the population of employees, as represented by the number of appointments, resignations, discharges, etc., represents a percentage of 298, 1,191 persons having filled 399 positions.

It has not been possible to maintain an adequate force of nurses and attendants to properly look after the patients entrusted to the care of the hospital at the rate of wages heretofore paid. The hours of service are long, the nature of the occupation is not in any way attractive, and the wages paid are entirely too low. It has been especially difficult to keep a sufficient force of employees at the Grafton Department. The only place to which the employees at Grafton can go for recreation when off duty is the city of Worcester, which is 8 miles distant. The round trip car fare of 30 cents is a very serious matter to persons who only receive from \$20 to \$25 per month for their services. There were 33 vacancies for employees on Nov. 30, 1916, owing to the fact that these positions could not be filled at the rate of wages which the appropriation made it possible for us to pay. In many instances employees have left the service of this hospital to go to other institutions where higher wages were offered. The adoption of a uniform rate of wages to apply to all State hospitals for the insane would remedy this difficulty and operate to the benefit of all concerned. It is useless, however, to adopt a uniform wage schedule or attempt to put into effect an increased rate of wages unless the appropriations made by the Legislature will be sufficiently large to cover the needs of the institutions. A uniform rate of wages, if enacted into a law and made statutory, would remedy this difficulty.

The Medical Service of the Hospital.

The work of the medical staff has been very seriously hampered by the insufficient number of physicians. During a part of the year there were only 2 physicians at the Worcester Department taking care of nearly 600 patients, and 3 physicians at Grafton with nearly 1,200 patients. The salaries which it has been possible to pay with the appropriations available have rendered it almost impossible to secure additional men for the service. Notwithstanding the difficulties with which they have had to contend, the members of the staff have succeeded in carrying on the work of the hospital in a very satisfactory way.

An effort has been made to systematize the medical records of the hospital, and a comprehensive system of records, reports, etc., has been adopted. This was necessary for the purpose of covering ground not provided for in the system of records already in use. Staff meetings have been held daily during the week on Mondays, Wednesdays and Fridays at the Grafton Department, and on Tuesdays, Thursdays and Saturdays at the Worcester Department. . . .

The social service work of the institution has been carried on actively during the year. Owing to the limited size of the medical staff it has not been possible to have this work carried on by a physician, and an experienced nurse has been assigned to this duty. . . .

The medical service of the hospital has been very generally rearranged during the year. All of the epileptics have been removed from the Worcester Department and two buildings set aside for their care at Grafton, the women being housed in the Pines C building and the men in Elms A. There were 222 epileptics in the institution at the end of the year. It will be recalled that all adult insane epileptics have been committed to this institution for some time in accordance with the plan formulated by the State Board of Insanity for their segregation, study and treatment at one place.

The patients suffering from tuberculosis have also been segregated and arrangements made for their special treatment and care at Grafton, the men being transferred to the Elms C building and a new tubercular ward for women opened in Pines A, where plenty of sunlight is available as well as surroundings which are generally adapted to the care of this class of patients.

The noisy, destructive, violent and disturbed classes generally have been removed from the Summer Street building of the Worcester Department so as to render that department less objectionable to the community in which it is located. This department will be used hereafter especially for the infirm, senile and feeble patients, the quieter class of chronic patients and those who are frequently visited by relatives and friends residing in Worcester. . . .

The training school has been carried on very successfully during the year. The junior class at the Grafton Department consists of 14 nurses,

the intermediate class of 14, and the senior class of 3. At the Worcester Department there are 11 in the junior class, 2 in the intermediate, and 8 in the senior class, the course of instruction outlined by the Commission on Mental Diseases being followed throughout. An adequate lecture room has been provided for the training school at the Worcester Department. In accordance with the instructions of the Commission on Mental Diseases, a school for attendants has been instituted at both the Grafton and Worcester Departments. The commencement exercises of the training school were held on Oct. 5, 1916, at Grafton, the annual address to the graduating class being delivered by Dr. Peter O. Shea of the Board of Trustees. Ten nurses received diplomas.

Grafton Department.

Seven of the ten empty buildings at Grafton have been occupied during the summer, and the others will be in use during the next few months. The administration building was occupied on May 8, 1916, and was partially furnished and equipped with an appropriation which was made available by the Legislature at its last session. In accordance with the instructions of the Board of Trustees, the administration of the hospital is now being conducted at the Grafton Department instead of at Worcester, as heretofore. The offices of the superintendent, treasurer and steward were all removed during the summer to the administration building at Grafton. The officers' cottage, formerly known as the matron's cottage, was completed and furnished during the summer, and is now occupied by various officers and employees who are on duty in the administration building.

MEDFIELD STATE HOSPITAL.

Opened in May, 1896. Present capacity, 1,542.

Valuation of the plant, per capita of capacity, \$1,120; real estate, \$1,016; personal, \$104.

Daily average number of patients under care, 1,641; in hospital, 1,610; in family care, 31; decrease for the year, 7.

Number Oct. 1, 1916, 1,680; in hospital, 1,647; in family care, 33.

All commitments, 92; decrease for the year, 20.

Commitments as insane, 90; decrease for the year, 20.

First cases of insanity, 79; 87.78 per cent.

Voluntary admissions, 2.

Commitments as inebriate, none.

Temporary-care admissions, 2.

Deaths of the Insane.

Whole number, 93; 5.05 per cent. of whole number of persons treated.

Curable forms of mental disease present in 9.68 per cent.; tuberculosis in 22.58 per cent.; senile insanity in 16.13 per cent.; general paralysis in 6.45 per cent.; coarse brain lesions in 2.15 per cent.

Finances.

Expenditures from maintenance funds, \$410,832; total receipts, \$10,205; being \$361 from private patients, \$7,776 from reimbursing patients, \$2,068 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$4.79; the same less repairs and improvements, \$4.66.

Weekly per capita cost of whole service, \$1.98; ward service, \$0.96.

One person employed for every 4.21 patients; 1 nurse for every 7.73 patients.

Average monthly wage for all persons employed, \$37; for nurses, \$32.90; men, \$36.37; women, \$30.85.

Extract from Superintendent's Annual Report.

I said in last year's report, "The number of infirm patients and bed cases due to general feebleness has gradually increased for the past three years. These are residual, belonging to the large number of demented cases transferred here in former years. Until the character of the population in the hospital is radically changed, this increase of infirm patients from year to year must be expected."

I repeat this to emphasize this condition, which is practically the same as last year. To show how little change there has been in the population during the past twenty-one years it is but necessary to state that only 4,095 different persons have been received in the hospital in that period. This is a very small number of admissions compared with the admissions to hospitals of this class.

With similar institutions we have been much cramped for efficient help. At no period during the history of the hospital has the number of attendants been so small as during the past summer. This shortage has been more acute in some of the domestic departments, especially in the kitchen and laundry. At times it has been impossible to get the necessary number of workers, and in consequence the work has suffered, especially during the month of August.

The advance in the cost of living has had its effect upon wages, and

there has been and is a constant demand for an increase of wages in all the departments of the hospital. The weekly per capita cost of maintaining the patients shows considerable increase and amounts to \$4.81 per week, the highest ever reached in the maintenance of this institution.

GARDNER STATE COLONY.

Opened in October, 1902. Present capacity, 722; increase for the year, 11.

Valuation of the plant, per capita of capacity, \$894; real estate, \$783; personal, \$111.

Daily average number of patients under care, 779; in colony, 743; in family care, 36; increase for the year, 24.

Number Oct. 1, 1916, 794; in colony, 749; in family care, 45.

Admitted by transfer, 79; increase for the year, 21.

Deaths of the Insane.

Whole number, 13; 1.54 per cent. of whole number of persons treated.

Curable forms of mental disease present in 15.38 per cent.

Tuberculosis in 15.38 per cent.

Finances.

Expenditures from maintenance funds, \$180,361; total receipts, \$3,784; being \$2,794 from reimbursing patients, \$990 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$4.40; the same less repairs and improvements, \$4.13.

Weekly per capita cost of whole service, \$1.71; ward service, \$0.55.

One person employed for every 5.33 patients; 1 nurse for every 12.27 patients.

Average monthly wage for all persons employed, \$41.74; for nurses, \$30.88; men, \$31.59; women, \$29.38.

Extract from Trustees' Annual Report.

For several years we have repeated our request for a building which should serve us not only as a chapel for Sunday services, but as a place for secular meetings, not only of the patients, but of our employees. Our colony is remote from any center where our employees can find recreation after the day's work, and it is incumbent upon us to provide opportunities

for it, if we are to keep a contented and loyal body of employees, — a most desirable thing for the well-being of the patients. Nothing interferes more with the comfort and efficiency of the patients than frequent changes of dissatisfied employees.

Extract from Superintendent's Annual Report.

The Colony

was established in 1902 to determine what progress could be made with the chronic insane by industrial training or treatment.

The head of every department, with the active aid of those assisting him or her, has had this constantly in mind, and it is gratifying to report that during the year just ended an average of 95 per cent. have been occupied a part or all of each day; some, of course, in minor occupations, and some, because of physical or mental illness, infirmity, or old age, in the lighter work of the wards, but for the most part (about 60 per cent.) they are employed throughout the entire day each day of the week. . . .

Recreation and Diversion.

The usual entertainments, dances, socials, etc., have been held at intervals indoors throughout the winter, and suitable outdoor exercises through the summer. Through the summer months the industrial building is closed at 3 o'clock, and the remainder of the afternoon spent out of doors. Moving-picture entertainments were held out of doors during the summer months, but could not be continued indoors for lack of a suitable assembly hall. . . .

The Cattle Show and Fair

which has now become a regular annual event was this year made more successful than last by the holding of a two-day fair, the first open only to the patients and officers of the colony, the second open to the public. All arrangements were made through 25 committees, every employee of the colony serving on a committee.

Colony Day was well occupied by the parade, athletic events, ball game, midway, various farm and occupational exhibits, dinner in tent on lawn, special music, etc., and especially by a merry-go-round, which was filled to its capacity throughout the day. This feature was donated by the officers of the colony at an expense of \$100, in a full-hearted manner which demonstrated their real interest in the patients under their care. The pleasure which this supplied was highly gratifying. July 4, formerly the most looked-forward-to day of the year, has apparently been supplanted by Fair Day.

Visitors' Day, the second day, surpassed expectations, there being 1,600 visitors present. This day, as Colony Day, was replete with attractions. We were honored by the presence of the Lieutenant-Governor and the Honorable Council. All buildings were opened for inspection. A small admission fee was charged. There were booths for the sale of lunch, tonic,

candy, souvenirs, etc., the proceeds going towards the starting of an entertainment fund for patients.

We believe that Visitors' Day each year and similar occasions will do much to enlist the active interest and co-operation of the community. . . .

Employment.

Much has been said, and much will be written in annual reports of this year, as to the difficulty of obtaining and retaining employees, a very general and increasing difficulty. We have had but little trouble in keeping our positions filled, but if we are to retain the services of those employees who prove satisfactory we must pay higher wages. I recommend it especially for those who by their work have demonstrated to us that they are worth more. If the present general shortage of labor continues, however, it will be necessary to materially increase wages in all positions. In the main, I believe, with the living accommodations we provide, and the employment here being permanent, with reasonable hours of work, that most of our people would in the end be better off to make this their permanent work; but unfortunately the prevailing high wages, especially in some manufacturing industries, does not permit them to share this view. We therefore must meet the general increase in wages if the labor situation continues as at present. . . .

General.

From June 25 to September 10 all clocks were set ahead one hour, carrying out the saving daylight idea. This worked very well indeed. It permitted the working during the cool hours of the morning, and gave an extra hour of daylight at the end of the day for recreation and diversion. Certain other features, especially train accommodations, made it more satisfactory here than it would prove in other localities.

The educational exhibit has been continued and has been displayed in five different places. Interest in this seems to be sustained, and has proved to be an agent in interesting a large number of people in the work of the colony.

MENTAL WARDS, STATE INFIRMARY.

Opened in October, 1866. Present capacity, 673.

Daily average number of patients, 703; decrease for the year, 12.

Number Oct. 1, 1916, 717.

Commitments as insane, 37; decrease for the year, 5.

First cases of insanity, 31; 83.78 per cent.

Admitted by transfer, 112; increase for the year, 64.

First Cases of Insanity.

Native-born patients, 36.67 per cent.; mothers, 25 per cent.; fathers, 18.52 per cent.

Age sixty years or over, 16.13 per cent.

Resident in cities or large towns, 87.10 per cent.; country districts, 12.90 per cent.

Previous duration of insanity under six months, 36.67 per cent.

Causes: hereditary, 6.45 per cent.; alcoholic, 9.68 per cent.; senility, 19.35 per cent.; syphilis, 12.90 per cent.

Recoveries of the Insane.

Whole number, 3; 8.11 per cent. of commitments.

Recoveries of first cases of insanity, 3; 9.68 per cent. of first cases.

Deaths of the Insane.

Whole number, 91; 10.53 per cent. of whole number of persons treated.

Tuberculosis was present in 21.98 per cent.; senile insanity in 6.59 per cent.; general paralysis in 5.49 per cent.; coarse brain lesions in 2.20 per cent.

Extract from Trustees' Annual Report.

Mr. John B. Tivnan, our former chairman, was appointed by the Governor a member of the State Commission on Mental Diseases last summer, and while we were pleased that His Excellency recognized the good work which Mr. Tivnan had so unsparingly given to the State for the past thirteen years, and had selected him for a position where he would be able to be of still more service to the Commonwealth, yet our feelings, when we learned of his advancement, were not those of unmixed pleasure. We not unnaturally are more deeply interested in the State Infirmary and the State Farm than in the many institutions which we are sure will be benefited by his good sense and sound judgment.

We trust that we shall be pardoned if we publicly deplore the personal loss which we sustain by his retirement from this Board. . . .

Two of our departments — our insane wards and our two tuberculosis hospitals — embrace a large percentage of our population, as you undoubtedly know. There are, indeed, more tuberculosis patients in Tewksbury than are found in any of the State hospitals which care for that class of cases exclusively, with the single exception of the sanatorium in Rutland. And we are confident that all the patients under our supervision are receiving scientific as well as humane treatment.

Extract from Superintendent's Annual Report.

The department for the insane continues to be one of the notable features of the infirmary, forming a special community separate, to considerable extent, from the other portions of the institution. The health, general welfare and happiness of these patients is carefully guarded by the physicians and nurses in charge, and is a department where it has long been the practice to give special considerations and bestow innumerable attentions upon the individual members. These patients are the ones in the institution who are more fixed or permanent than the cases elsewhere, the residence of many of them dating back for more than twenty years; they are known, appreciated and receive personal recognition from all of the older employees of whatever department. Contentment is found in the freedom allowed to many of mingling in the institution, where they can take their places, to some extent, and form acquaintances and friendships, with other patients or members of the community who are not suffering from mental disorder. By the activities and the work in which these patients engage they are able to afford a great deal of assistance indirectly, and in some instances directly, for the benefit of a large number of the patients who are physically more unfortunate than themselves. The especial emphasis of their classification can only be apparent to them in the dining rooms and dormitories, and there is no question that it is a comfort to them to know that they are an important factor of the still larger community, and enjoying more privileges and liberties than are allowed to the others, for whom they feel their services are of positive value. Thus they have the assurance that they are of value and not a burden to the State which is caring for them.

A great deal of work has been performed by the men in farming activities and in grading, and in the care of the grounds, the domestic department and other places. The women also assist in innumerable ways outside of their own department and in the industrial rooms, where during the year just passed an increased amount of work on clothing and personal comforts for all parts of the institution has been shown, although there has not been a large variety of the more unusual articles and manufactures.

BRIDGEWATER STATE HOSPITAL.

Opened in September, 1886. Present capacity, 818.

Daily average number of patients, 828; increase for the year, 20.

Number Oct. 1, 1916, 839.

Commitments as insane, 95; increase for the year, 2.

First cases of insanity, 73; 76.84 per cent.

Admitted by transfer, 2; decrease for the year, 2.

First Cases of Insanity.

Native-born patients, 36.99 per cent.; mothers, 15.07 per cent.; fathers, 13.70 per cent.

Age sixty years or over, 1.37 per cent.

Resident in cities or large towns, 73.97 per cent.; country districts, 26.03 per cent.

Previous duration of insanity under six months, 11.90 per cent.

Causes: hereditary, 17.81 per cent.; alcoholic, 38.36 per cent.

Recoveries of the Insane.

Whole number, 12; 12.63 per cent. of commitments.

Recoveries of first cases of insanity, 10; 13.70 per cent. of first cases.

Recoveries in curable group A, 10; 90.91 per cent. of such curable cases.

Deaths of the Insane.

Whole number, 24; 2.61 per cent. of whole number of persons treated.

Curable forms of mental disease present in 8.33 per cent.; tuberculosis in 37.50 per cent.; general paralysis in 12.50 per cent.

Extract from Medical Director's Annual Report.

During the summer months there was some shortage of attendants, but in spite of the demand for munition workers the situation was not as acute as in former years. This was due in part, at least, to the new scale of wages mentioned in the report of last year. At no time has there been a lack of applicants, such as they were, to fill the positions, but it seemed better to maintain, if possible, our present standards and requirements rather than to fill the places with hospital rounders. The average age of those now in the service is approximately thirty-seven years. Two-thirds of these have had previous experience in this or other hospitals. Maturity brings judgment, tact and self-control, — qualities most essential in those whose duties bring them into close personal touch with the insane. The character of the service rendered by these men during the year just closed justifies the increased wage, and deserves your commendation.

The filling of staff positions by suitable men is becoming more difficult with each succeeding year. The reason is obvious. The young man graduating in medicine after many years of preparation, and at no small expense, looks forward to the future, and discovers that the field of

medicine is too comprehensive for any one man to cover, and that he must choose between devoting himself to a specialty or to general practice, between surgery or internal medicine, and that he may enter the public service or engage in private practice. The majority prefer the practice of medicine, plan for the future, anticipate and achieve some degree of success in private life. The assistant physician must be a man of character and well balanced, in addition to possessing the necessary professional qualifications. These attributes are as essential for institution work as for any other line or field of medicine, yet they do not carry the reward that the same qualifications may win in private life. The hospitals offer little as an incentive for the better class of men to enter this service. There is no future unless by chance the young physician happens to be one of the few chosen to fill an executive position, and then only after years of a one-room existence and the practical renouncement of his profession. The class of men desired are not slow in choosing that which offers the most. If they enter the service it is, as a rule, for a few years' further preparation and experience, and not with any idea of making this a permanent following. Our State hospitals are merely stepping stones in their career, and the public, or some institution in a neighboring State, derives the benefit of their experience and pays for it, while our hospitals are forced to accept the only alternative, — new and untried men. The subordinate positions should afford an opportunity for a professional career with a suitable reward, and home life in some degree comparable to that which the same effort and ability may win in the general practice of medicine.

A graded salary schedule based on length of service and ability, whereby a reasonable family income might be made, regardless of seniority or relative position, would go far towards relieving the present situation. This might be met either by a sufficient salary to enable him to live in the immediate neighborhood at his own expense, or at less expense to the State but of equal value to the recipient by a smaller salary, with quarters and family support as a part of his remuneration. Similar provisions should be made for other employees, particularly heads of departments or those having the direction and supervision of others; suitable family quarters, consisting of from three to five room tenements, should be provided. The use of these may be made a part of the compensation, or rented at a figure sufficient to pay interest on the investment. With the great amount of skilled and unskilled labor available in this institution the cost of a building adequate to house a dozen families would be nominal compared with the cost of similar construction in the community.

The teeth of the majority of our patients are in a deplorable condition, and I again recommend that a resident dentist be added to our force and that \$800 be appropriated for that purpose.

As in previous years, each new patient has been brought before the staff and his case presented by the physician in immediate charge. All cases discharged are similarly considered. A record is kept of the discus-

sion and of individual opinions for future reference. These meetings have stimulated the efforts of all those taking part. The patients themselves are interested in the attention shown them, and, as a result, not infrequently points are brought out which might otherwise have been lost.

Industrial and diversional occupation has been encouraged as in previous years. Outside labor appeals to the majority of those willing and able to work, although a few have shown considerable interest and dexterity in the industrial room.

MONSON STATE HOSPITAL.

Opened in May, 1898. Present capacity, 967; decrease for the year, 1.

Valuation of plant, per capita of capacity, \$1,012; real estate, \$848; personal, \$164.

Daily average number of patients, 1,003; increase for the year, 29.

Number Oct. 1, 1916, 993.

Insane commitments, 14; decrease for the year, 41.

Sane epileptics admitted, 182; increase for the year, 46.

First cases of epilepsy, 170, being 87.63 per cent. of all epileptics received.

The general statistics for the year are as follows: —

	INSANE.			SANE.			TOTALS.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
Patients in the hospital Oct. 1, 1915.	208	158	366	317	332	649	525	490	1,015
Admitted within the year.	17	11	28	148	97	245	165	108	273
Viz.: by commitment.	8	6	14	19	12	31	27	18	45
by voluntary.	2	4	6	92	59	151	92	59	151
by transfer.	—	—	—	—	—	—	2	4	6
from visit.	—	—	—	12	7	19	12	7	19
from escape.	—	—	—	2	—	2	—	—	—
from escape, nominally admitted to discharge.	—	—	—	2	1	3	—	—	—
from visit, nominally admitted to discharge.	7	1	8	23	18	41	30	19	49
Whole number of cases within the year.	225	169	394	465	429	894	690	598	1,288
Dismissed during the year.	41	30	71	130	94	224	171	124	295
Viz.: discharged.	13	3	16	45	47	92	58	50	108
as recovered.	—	—	—	—	—	—	—	—	—
as capable of self-support.	—	—	—	—	—	—	—	—	—
as improved.	9	3	12	19	23	42	28	26	54
as not improved.	4	—	4	26	24	50	30	24	54
died.	22	10	32	23	16	39	45	26	71
transferred.	2	15	17	—	—	—	2	15	17
on escape, Oct. 1, 1916.	2	2	4	3	—	3	5	—	5
on visit, Oct. 1, 1916.	2	2	4	59	31	90	61	32	94
Patients remaining Sept. 30, 1916.	184	139	323	335	335	670	519	474	993
Viz.: State patients.	169	130	299	322	303	625	491	433	924
private patients.	3	5	8	9	16	25	12	21	33
reimbursing patients.	12	4	16	4	16	20	16	20	36
Number of different persons within the year.	218	168	386	438	410	848	655	577	1,232
Number of different persons admitted.	10	10	20	122	78	200	132	88	220
Number of different persons admitted voluntarily and by commitment.	8	6	14	110	71	181	118	77	195
Number of different persons dismissed.	34	29	63	105	75	180	139	104	243
Number of different persons dismissed to community.	32	14	46	105	75	180	137	89	226
Number of different persons discharged recovered.	—	—	—	—	—	—	—	—	—
Number of different persons discharged capable of self-support.	—	—	—	—	—	—	—	—	—
Daily average number of patients.	196.03	147.14	343.17	329.74	330.45	660.19	525.77	477.59	1,003.36
Viz.: State patients.	187.53	137.60	325.13	317.63	300.32	617.95	505.16	437.92	943.08
private patients.	2.70	5.26	7.96	9.33	16.68	26.01	12.68	21.94	33.97
reimbursing patients.	5.80	4.28	10.08	2.78	13.45	16.23	8.98	17.73	26.31

¹ Two males discharged as sane and readmitted as insane; one female discharged as sane and readmitted as insane.

² One male admitted as sane, discharged, and readmitted as sane.

First Cases of Epilepsy.

Native-born patients, 84.11 per cent.

Mean age at onset of epilepsy, 12.04 years; when admitted, 25.72 years.

Resident in cities or large towns, 73.53 per cent.; country districts, 26.47 per cent.

Death of Epileptics.

Whole number, 71; 5.76 per cent. of whole number of persons treated.

Tuberculosis was present in 9.85 per cent.; epilepsy was the immediate cause of death in 45.07 per cent. Mean age at first attack of epilepsy, 13.66 years; at death, 34.01 years.

Finances.

Expenditures from maintenance funds, \$250,669; total receipts, \$18,747; being \$9,231 from private patients, \$3,951 from reimbursing patients, \$5,565 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$4.72; the same less repairs and improvements, \$4.59.

Weekly per capita cost of whole service, \$2.12; ward service, \$0.97.

One person employed for every 4.95 patients; 1 nurse for every 9.55 patients.

Average monthly wage for all persons employed, \$45.53; for nurses, \$40.18; men, \$42.72; women, \$37.80.

Extract from Superintendent's Annual Report.

A consulting staff has been appointed by the trustees, consisting of the following: consulting neurologist, consulting physician, alternate consulting physician, alternate consulting surgeon, consulting physician on diseases of the skin, consulting orthopedic surgeon, consulting surgeon, consulting oculist and aurist. A plan of co-operative work has been considered. No doubt much good will come from the association with this staff. . . .

The staff meetings have been continued through the year, daily, as formerly.

A pasteurizing outfit has been installed. The health of the cows seems to be excellent; they have regular examinations under the direction of the State Bureau of Animal Industry, and with the additional safeguard

of pasteurization of milk, we seem to be meeting all the requirements in this direction.

We have had absolute freedom from hog cholera during the year, and the veterinarians of the Animal Bureau pronounced our pigs in perfect health and in excellent condition.

We had a meeting in June of the Hampden County Improvement League, so that we have kept in touch with their methods and with such new methods as have been recommended by the Agricultural College.

Certain advances in wages, due to the plan of allowing vacations to all employees, to the matter of an increase owing to the length of time a person has been employed, to an increase at the end of eight months of service instead of a year, and in a very few instances owing to the labor demands, have increased our expenditure for wages about \$400 a year. . . .

The school work has gone on very satisfactorily, and the arts and crafts have also developed.

FOXBOROUGH STATE HOSPITAL.

Opened in February, 1893. Present capacity, 299.

Valuation of the plant, per capita of capacity, \$1,150; real estate, \$957; personal, \$193.

Daily average number of patients under care, 328; increase for the year, 32.

Number Oct. 1, 1916, 347.

All commitments, 98.

Commitments as insane, 98.

First cases of insanity, 77; 78.57 per cent.

Voluntary admissions, none.

Commitments as inebriate, none.

Temporary-care admissions, 3.

First Cases of Insanity.

Native-born patients, 33.77 per cent.; mothers, 16.90 per cent.; fathers, 13.89 per cent.

Age sixty years or over, 10.39 per cent.

Residents in cities or large towns, 90.91 per cent.; country districts, 9.09 per cent.

Previous duration of insanity under six months, 29.23 per cent.

Curable forms of insanity, 6.49 per cent.

Causes: hereditary, 50.65 per cent.; alcoholic, 11.69 per cent.; senility, 6.49 per cent.; syphilis, 9.09 per cent.

Deaths of the Insane.

Whole number, 43; 9.53 per cent. of whole number of persons treated.

Curable forms of mental disease present in 4.65 per cent.; senile insanity in 11.63 per cent.; general paralysis in 18.60 per cent.; coarse brain lesions in 9.30 per cent.

Finances.

Expenditures from maintenance funds, \$123,276; total receipts, \$3,639; being \$721 from private patients, \$2,593 from reimbursing patients, \$325 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$7.11; the same less repairs and improvements, \$6.85.

Weekly per capita cost of whole service, \$3.16; ward service, \$0.75.

One person employed for every 3.28 patients; 1 nurse for every 9.05 patients.

Average monthly wage for all persons employed, \$45; for nurses, \$29.74; men, \$31.18; women, \$27.80.

MASSACHUSETTS SCHOOL FOR THE FEEBLE-MINDED.

Opened in October, 1848. Present capacity, 1,498; at Wal-
tham, 1,183; at Templeton, 315.

Valuation of plant, per capita of capacity, \$692; real estate, \$604; personal, \$88.

Daily average number of patients, 1,611; increase for the year, 6.

Number Oct. 1, 1916, 1,590.

The general statistics for the year are as follows: —

	Males.	Females.	Totals.
Number present Sept. 30, 1915,	1,014	620	1,634
Admitted during the year,	236	98	334
School cases,	51	29	80
Custodial cases,	67	38	105
By transfer,	3	7	10
From visit,	37	17	54
From escape,	9	—	9
Nominal admissions from visits,	50	6	56
Nominal admissions from escape,	19	1	20
Whole number of cases within the year,	1,250	718	1,968
Dismissed within the year,	275	103	378
Discharged,	112	36	148
Capable of self-support,	25	—	25
Improved,	72	28	100
Not improved,	15	8	23
Died,	28	11	39
Transferred,	10	22	32
On visit,	94	33	127
On escape,	31	1	32
Number present Sept. 30, 1916,	975	615	1,590
State patients,	950	601	1,551
Private patients,	19	12	31
New England beneficiaries,	6	2	8
Daily average number,	1,001	610	1,611
Number at School Sept. 30, 1916,	692	615	1,307
Number at Templeton Colony Sept. 30, 1916,	283	—	283
Applications during the year,	—	—	347

Finances.

Expenditures from maintenance funds, \$320,871; total receipts, \$12,964; being \$8,559 from private sources, \$1,299 from reimbursing patients, and \$3,106 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$3.82; the same less repairs and improvements, \$3.67.

Weekly per capita cost of whole service, \$1.55; ward service, \$0.72.

One person employed for every 5.73 patients; 1 nurse for every 9.08 patients.

Average monthly wage for all persons employed, \$38.74; for nurses, \$28.44; men, \$35.67; women, \$27.28.

Extract from Trustees' Annual Report.

We may safely say that the public is gradually becoming aroused to the menace of the feeble-minded when at large in the community. We called attention last year to the meetings and clinics that were being held in different cities of the Commonwealth. Despite these meetings and the partially aroused public sentiment, the ground is but scratched. The clinics that have been held and the lectures that have been given have started an active campaign of education among the people. When individuals and clubs will circulate little leaflets such as was distributed last winter by the Monday Evening Club of Worcester, containing "A Few Facts to call your Attention to the Urgent Need of More Adequate Provision being made for the Care of the Feeble-minded and of making Active the Law we now have providing for the Care of Defective Delinquents," it is obvious that *some* people in *some* places are awake to the importance of the problem.

The social significance of mental defect was the burden of the lectures of the winter, and is still a vital problem before the State. At this very time the Massachusetts Society for Mental Hygiene is devoting its annual conference in Boston to the subject of the feeble-minded. From Dr. Fernald's address, delivered at the close of the first session, we would quote the following sentences in which he urges "the establishment by the State of a commission or bureau to take account of all neglected and uncared-for feeble-minded persons," — a recommendation in which we heartily concur. "Such a central supervision should be supplemented by various social organizations in the local fields, special classes in all cities and large towns, and mental clinics for diagnosis all over the State. Whole nests of feeble-mindedness would be disclosed in certain sections of cities and towns, and once clearly revealed the measures for relief and protection would follow quite naturally."

We desire to express the earnest hope that the Legislature of 1917 and the prison authorities will make some provision for the defective delinquent. By chapter 595 of the Acts of 1911 the Prison Commissioners were authorized to construct such buildings, or to establish an institution, as may be needed or expedient, for the proper care of such delinquents as shall be committed to such institution. The subject has been agitated, considered and discussed. Now constructive action should be taken and provision made to put the result of this consideration in concrete form. Until such provision is made we are called upon from time to time to take feeble-minded persons for whose care, because of their delinquency, we have not suitable buildings or facilities.

*Extract from Superintendent's Annual Report.**Health.*

The general health of the patients and employees, now totalling over 1,900, has been excellent. There were no serious accidents. There were no deaths among the 300 patients at the colony, and no cases of serious illness except as described herewith.

The very large amount of visiting, especially by the young brothers and sisters of the patients, hitherto permitted, is very likely to introduce contagious and infectious disease. During the year a young child who accompanied the visiting mother of one of the children was observed to be suffering from whooping cough. The child who was visited contracted the disease, communicated it to 15 others, and 5 of these children died of the disease within a few weeks. These patients were all helpless idiotic patients in the hospital department.

The outbreak of typhoid at the end of the school year was reported in the last annual report. This outbreak continued during the present year to the extent that we had 8 cases in four different houses. There seemed to be no connection between the cases in the different houses, and we are yet unable to state the source of the disease. This whole series of cases was of a very severe type, and there were three deaths, including one patient who died at the Waltham Hospital. In accordance with the suggestions of the State Department of Health, nearly all of our patients and employees have been given typhoid immunization. . . .

With the approval of the State Department of Health, the school was partially quarantined from September 21 to November 18, on account of the prevalence of infantile paralysis. The parents were requested not to visit their children, and children at home on vacation were not allowed to return. Fortunately, no cases of the disease occurred among our patients. . . .

The long-desired recreation building for our employees, authorized by the last Legislature, is now being roofed in and will be in use within a few months. We expect this house to be the social center of the institution. . . .

Templeton Farm Colony.

The 300 boys at the Templeton Farm Colony have at least equaled the record of previous years in the way of health, content and happiness, and of useful and intrinsically valuable work accomplished.

Our tillable land at the colony is now in a high state of cultivation as a result of the constant efforts of the boys. The application of the principles of scientific farming, of proper crop rotation and of skillful fertilization is now showing results in the amount and value of the food products produced on our farm and directly used on the tables of our patients and employees. The total value of the farm products during the past year was \$67,286.34. . . .

During the year the boys at the colony cleared 6 acres of rough land ready for plowing, built 606 square yards of cement sidewalk, 1,750 square feet of cement partitions, 618 square yards of basement floors, 2,200 square yards of new roads, and resurfaced 1,800 square yards of roads. This work was in addition to the work done by the boys in the construction of the new cement cow barn and hay shed, and the fireproof bungalow for 15 boys. These buildings are now practically ready for occupancy. The farmhouse at the Eliot Colony was a large, old, rambling, wooden structure. During the year we have replaced the wooden construction in the entire center section of this building with cement partitions and fireproof floors, so that the fire risk at this colony is now a negligible factor.

The program of progressively improving and developing the forest land has been continued, and this year 40 acres of our forest area have been entirely renovated and improved, and 20,000 young white pines have been planted. . . .

Out-Patient Clinics.

The superintendent delivered 47 public lectures on feeble-mindedness before various organizations in cities and towns throughout the State. There were 43 clinics at the school for classes and groups of students, teachers, physicians, etc.

An institution for the feeble-minded is compelled to be an agency for practical mental hygiene. A large part of our correspondence is devoted to the answering of questions and inquiries regarding the diagnosis, education, protection, prevention and segregation of the feeble-minded. As in previous years a large part of the time of the staff has been devoted to talking with and showing about visitors from this and other States, who are seeking information which they wish to use for the benefit of their communities.

The relations of the school to the feeble-minded child, the parents, the school authorities, the courts, etc., show that in this State we are now dealing with an advanced stage of the movement to adequately deal with the problem of the feeble-minded. It is beginning to be realized that we have been a little too ready, perhaps, to make generalizations. There has been too great a tendency to regard feeble-mindedness as a definite entity, and to assume that all defectives are equally dangerous as to the probability of dependency, immorality or criminality, or as to the possibility of the transmission of their defect to their progeny. As a matter of fact, we know of many unmistakable defectives who, in sheltered or even in unsheltered homes, lead beautifully serene and moral and useful lives, and we also know of cases of definite defect, due to some environmental cause, where there is not the slightest danger that the defect would be transmitted, even if the person should become a parent.

It should not be forgotten that until within a few years the various synonyms of mental defect were used to include only what are now known as the idiot and imbecile groups. Practically the whole of the so-called

moron group, of whom there are perhaps many times as many as there are of the idiot and imbecile group combined, and whose presence in the community is of far more sinister significance, were not generally recognized as being mentally defective and irresponsible until improved diagnostic methods came into use. It is gradually becoming evident that while it is easy to have an adult male moron committed to the institution, it is not an easy matter to keep him here permanently. He seems so capable and harmless under institutional conditions that if his friends do not remove him he is pretty sure to run away eventually. If the courts are appealed to, the judge almost invariably directs his discharge. Over 100 former pupils at this school, discharged against our protest, are behaving themselves at home and earning weekly wages of from \$8 to \$21. Many of these boys have been persuaded to return to the school every three months to report, and it should be said that many of them have done well for a long time. This informal and really unauthorized parole should be legally authorized and provided for as the perhaps less desirable alternative for institutional life, with suitable provision for future investigation and visitation, constituting practically a permanent probation system for the feeble-minded.

WRENTHAM STATE SCHOOL.

Opened in June, 1907. Present capacity, 1,130; increase for the year, 125.

Valuation of plant, per capita of capacity, \$836; real estate, \$746; personal, \$0.90.

Daily average number of patients, 953; increase for the year, 312.

The general statistics for the year are as follows: —

	Males.	Females.	Totals.
Number remaining Sept. 30, 1915,	278	396	674
Admitted within the year,	252	291	543
By commitment,	225	257	482
By transfer,	9	22	31
Returned from visit,	6	6	12
Returned from escape,	—	—	—
Nominally from visit,	6	6	12
Nominally from escape,	6	—	6
Whole number of cases within the year,	530	687	1,217
Dismissed within the year,	129	96	225
Viz.: Discharged,	41	21	62
Transferred,	1	5	6
Died,	9	16	25
On visit Sept. 30, 1916,	56	54	110
On escape Sept. 30, 1916,	22	—	22
Remaining Sept. 30, 1916,	401	591	992
Daily average number,	399.24	554.207	953.447

Finances.

Expenditures from maintenance funds, \$191,933; total receipts, \$1,730; being \$471 from private sources, \$590 from reimbursing patients, \$669 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$3.68; the same less repairs and improvements, \$3.52.

Weekly per capita cost of whole service, \$1.31; ward service, \$0.61.

One person employed for every 7.27 patients; 1 nurse for every 11.17 patients.

Average monthly wage for all persons employed, \$43.24; for nurses, \$30.84; men, \$43.88; women, \$29.54.

Extract from Trustees' Annual Report.

The pressure for admission to the Wrentham school is greater than ever before, in consequence, no doubt, of the better general comprehension of the prudence of segregating the feeble-minded. The courts are taking closer note of mental defect in persons arraigned before them; probation officers are realizing more keenly the futility of undertaking reformation in those mentally incapacitated for response to the effort; the State institutions for reform — the two reformatories and the three industrial schools for juveniles — are carrying further the discrimination between the mentally normal and defectives; charitable and social agencies are appraising more closely the receptivity of helpful treatment among their beneficiaries; and all these are turning to the schools for the feeble-minded with request or demand that those clearly marked as mentally subnormal find harbor there.

The Legislature of Massachusetts cannot be charged with indifference to the need of more ample accommodations for the distinctly feeble-minded. The development of the Wrentham State School, and the recent provision for a third institution at Belchertown, are evidence of the Commonwealth's effort to deal with a well-recognized situation. But there is ground for a question whether the Legislature has yet arrived at a sense of the need of the right sort of treatment for those committed to these schools. Apparently the State's policy is too much colored by the mistaken belief that the problem is met when the feeble-minded are taken into custody. Additional dormitories are provided with seeming ease, while the other provisions for the school which would make its work effective are regarded with comparative indifference. We wish, therefore, to point out the two momentous facts which actually hamper and even go far to destroy the usefulness of such an institution. They are (1) the actual presence of persons in the school, and the pressure for the admission of more whose mental defect is linked with marked criminal tendencies;

and (2) the insufficient recognition of the need for the fullest training in useful and helpful ways of the persons brought here, shown in a lack of equipment to that end.

As to the class known as defective delinquents, the Legislature, as the body to guard and promote the interests, both moral and physical, of the public, has need to comprehend more fully than it has yet done the unfitness of the feeble-minded schools for their detention. The distinction between the feeble-minded and the defective delinquent is not fanciful. On the contrary it is perfectly clear, and the slightest familiarity with the population of either of the feeble-minded schools furnishes the evidence to support it. For the feeble-minded, the possibilities of helpfulness in these schools are very great. Their needs are fully met; they are trained to the utmost of their capacity; they are made happy. But when to this community of needy persons there is added an element which is distinctly criminal and which calls for quite a different order of control, the fulfillment of the real purpose of the school is made difficult, and in a measure defeated. Both for their own sakes and for the good of the children into whose presence they are now forced by reason of lack of provision for them, the Commonwealth needs to provide some other sort of institution.

Extract from Superintendent's Annual Report.

The opening of the buildings on the north side late last year left much to be done this year in the way of completing the organization and furthering the arrangements for the admission of the large number of inmates that have been received this year. This work was very difficult on account of our not being able to secure a sufficient number of employees. In fact, one of the new buildings was not occupied for six months after completion on account of our inability to obtain the required number of employees. At one time during the year the institution had only two-thirds the necessary number of employees. This has imposed a difficult task on our employees and for months they were actually overworked, but with the usual faithfulness of efficient people they did very little complaining.

The farm has filled its usual large place in not only providing fresh vegetables, fresh eggs, fresh milk and pork for the table, but in a broader sense by furnishing most excellent out-of-door school opportunities for bringing our boys, both large and small, intimately in touch with nature, and has given them as well an excellent opportunity for a healthy expression of their energy.

The boys' industrial rooms were closed during the vacation months and all the boys, with their industrial teachers, spent the entire day out of doors, the smaller boys in the gardens and the larger boys grading, building roads, teaming and farming.

During the vacation months two playground teachers were employed, one for the girls' playgrounds and one for the boys' playgrounds. These teachers devoted their entire time to organizing games and plays, and instructing the employees in charge of the children how to best direct

them in their play. One feature of the playground work that was most satisfactory and interesting was the daily period devoted to the telling of stories. The smaller boys were thus given half a day in the gardens and half a day on the playgrounds. The smaller girls were also given instruction in sewing and the lighter duties of housekeeping for half a day, and during the remainder of the day their activities were directed on the playgrounds. In this way, although the children had two months' vacation, I believe the knowledge they acquired was equal to that gained during any other two months of the year.

The necessity of the social features of institutional life being emphasized is too little understood by the public. Deeply implanted in the human mind is the desire for sharing enjoyment with others. This quality is very constant in an institution population. Much of the training in the community is to fit people to live and work and play together. This is equally true of a well-conducted institution. In fact, a well-ordered and healthy institutional life must center in a highly developed social organization. During the work and school part of the day the organized school and industrial activities keep the population occupied. It is just as important to have the afternoon and evening, the time of day when people naturally turn to recreation and social life, organized to a high state of perfection; otherwise this will be the time, in an institution as elsewhere, when much mischief is manifested and social unrest will occur.

The aim, therefore, is to have the children's time arranged so they are never bored with idleness. Out of school hours there is always something of interest taking place. The general entertainments in the assembly hall consist of moving pictures with music, school exhibitions once a month, showing the progress made by the different classes, dances, operettas and plays, all given by the pupils.

Social hours are held at the various cottages in the evenings, a certain number of the teachers being detailed to specialize in this phase of the work. At these social hours games, dancing, singing and story telling are the order of the evening. Each cottage is provided with a graphophone, and there is a circulating library of records. An abundant supply of good story books and illustrated magazines are provided. A pleasing arrangement is the one where a number of girls gather into a group and do the mending, while one of the group reads an interesting story.

The music department is strong, both educationally and socially. The band, orchestra and glee clubs have been of educational value to the children receiving instruction, and a source of great pleasure to the entire institution population.

Birthday parties are held each month for the younger children, those whose birthdays occur during the month the party is given acting as hosts and hostesses to the rest of the children.

Each year, on April 4, the anniversary of the formal opening of the institution is celebrated by a general birthday party. This is observed by half of the day being given over to social affairs, and the serving of a special birthday cake at supper in each cottage. In the evening in the

assembly hall are shown lantern slides made from pictures taken at the school. These pictures begin with the inception of the institution, when it consisted of one farmhouse with a population of ten boys, and covers the entire period of development up to the present time. They show the boys at work in the early days on the farm or engaged in hauling stone or gravel, and otherwise assisting in the erection of buildings now occupied by other children, who, in turn, have helped in various ways to prepare for the reception of others who have come after them. These pictures furnish pleasant reminiscences for the children who have had a part in this work, and are of interest to the children who have been admitted to the school during the year.

During the summer vacation a series of picnics is arranged, two afternoons each week being given over to this recreation. Much attention is given to competitive games in the open, chief of these being baseball and croquet.

The baseball season for both boys and girls opens on April 19, and games are played Saturday afternoons and holiday afternoons throughout the summer. Several times during the season the older boys played the local town teams of Wrentham and the surrounding villages, which gave an added interest to the program.

This summer the larger girls were much interested in croquet, and in leisure hours in the afternoon and during the evenings manifested much interest in this recreation. The close of the season was celebrated by a successful tournament.

The annual fair and festival held in October is the final out-of-door event of the season. All of the institution activities are here represented in an attractive manner. This grouping together of the exhibits affords the children an opportunity to see what is being done in other departments than their own, and stimulates them to have the work of their own particular department such as to compare favorably with that of other departments.

THE PRIVATE INSTITUTIONS.

THE McLEAN HOSPITAL.

Opened in October, 1818. Present capacity, 220.

Valuation of plant, per capita of capacity, \$9,162.

Average weekly per capita cost of maintenance, \$33.25.

Daily average number of patients, 209.

Number Oct. 1, 1916, 212.

All commitments, 132; increase for the year, 21.

Commitments as insane, 122.

First cases of insanity, 76; 62.30 per cent.

Voluntary admissions, 78; increase for the year, 27.

Temporary-care admissions, 14.

Admissions as inebriates, 5.

First Cases of Insanity.

Native-born patients, 81.58 per cent.; mothers, 78.38 per cent.; fathers, 71.62 per cent.

Age sixty years or over, 19.74 per cent.

Residents in cities or large towns, 68.42 per cent.; country districts, 31.58 per cent.

Previous duration of insanity under six months, 47.37 per cent.

Curable forms of insanity, 53.95 per cent.

Causes: hereditary, 51.32 per cent.; alcoholic, 7.90 per cent.; coarse brain lesions, 10.53 per cent.; syphilis, 10.53 per cent.

Recoveries of the Insane.

Whole number, 38; 31.15 per cent. of commitments.

Recoveries of first cases of insanity, 22; 28.95 per cent. of first cases.

Recoveries in curable group A, 20; 48.78 per cent. of such curable cases.

Deaths of the Insane.

Whole number, 21; 6.27 per cent. of the whole number of persons treated.

Curable forms of mental disease present in 33.33 per cent.; general paralysis in 38.10 per cent.; coarse brain lesions in 38.10 per cent.

Extract from Superintendent's Annual Report.

Staff conferences have been held regularly once a week as heretofore. The aim is not so much to attach a diagnostic name to the case for purposes of classification as to interpret the individual as a human medico-sociological problem, — a problem in faulty adjustment to environment; to bring out the manner, nature and causes of the person's maladjustment; and to emphasize those features that may be of scientific or of sociological or therapeutic interest and value.

To this end the effort is made to embody in the records of each patient a sufficient number of *facts*. It is comparatively easy to make briefly a vivid picture of the patient by giving terse judgments of the observer, but for purposes of study such judgments are almost valueless. The facts on which the judgments are formed are the only things of permanent scientific value. They will still be useful when our present interpretations

of them shall have been superseded and thrown into the scrap heap of bygone theories.

Hence, in accordance with modern trends, there is an effort at more intensive study of the patient on admission, with the view of determining more minutely the adaptive mechanisms of the patient, and the type, nature and causes of the alterations in them. The patient has been able to adapt himself to the circumstances of his life as successfully as the average up to the time of his illness. He then began to adapt himself less well. In his past life we try to find what general situations he has had to adjust himself to, what special or significant experiences or difficulties he may have had, what sort of make-up he has had with which to meet them, what his methods and success in meeting and handling these difficulties have been, and what handicaps he may have had in the way of inherited endowment or tendency to disease, of physical disabilities, of mental deficiencies or tendencies. Of the illness itself we try to get as many details of fact as possible concerning his attitude, his general and particular behavior in immediate reaction to his situation, and his comprehension of his situation and condition. From the patient himself we try to get as full an expression as possible of his own comprehension of his present and past, near and remote situations, of himself as related to them, of his reactions to them; of his own condition, and of the causes for his failure to adapt himself well. We of course note also his present behavior, disorders and other symptoms, mental and physical. In other words, we continue to study the patient from the biological point of view and to try to express his total reaction to his total environment. We are trying to gather data for an interpretative as well as a descriptive psychiatry.

Upon this department will devolve the details of conducting the psychiatric out-patient clinic at the Massachusetts General Hospital. This is looked forward to with great interest, and it is hoped that the staff will soon be large enough to take it up. It will bring the staff in closer touch with specialists in other fields as well as with men in general medicine and surgery, and also with medical students, who have ceased to come to clinics here since the establishment of those at the Psychopathic Hospital. It will also broaden the experience of the staff by presenting to them borderline cases and others which do not come to this hospital. It also has its sociological value, which is by no means to be ignored.

OTHER PRIVATE LICENSED INSTITUTIONS.

Number, 24. New licenses were granted during the year as follows: —

To Dr. Frederick L. Taylor of Jamaica Plain to care for persons addicted to the intemperate use of narcotics or stimulants.

To Dr. John F. Krasneye of Arlington Heights to care for the insane, epileptic, feeble-minded or persons addicted to the intemperate use of narcotics or stimulants.

On Sept. 30, 1916, there were in these institutions 233 patients, an increase of 13 for the year. The insane numbered 144, or 61.80 per cent. There were 213 admissions of the insane and 209 dismissals during the year.

Thirty visits were made to these institutions by a physician representing the department.

The numbers on Sept. 30, 1916, for each institution are set forth in the following tabulation:—

UNLICENSED HOMES.

Supervision was continued of unlicensed homes where the insane, feeble-minded, epileptic and persons addicted to the intemperate use of narcotics or stimulants are likely to be found. In each case the requirements of the law were explained, and a copy left with the manager.

FAMILY CARE OF THE INSANE.

UNDER COMMISSION.

First patient boarded in a family, Aug. 10, 1885. Since placed, 1,274 different patients.

Number in families Oct. 1, 1916, 64 women.

Placed during the year, 30 persons, an increase of 25.

Daily average number for the year, 74, a decrease of 72.

Passed out of public support: —

During the year, 2, — both discharged to friends.

Since 1885, 269 different patients, viz.: discharged self-supporting, 94; discharged to care of friends, 43; self-supporting in families, 81; boarded with friends without public expense, 31; became private patients, 20.

Reappeared under public support: —

During the year, 4; since 1885, 95; 35 per cent.

Number of families having patients, 27, a decrease of 11; 11 families having 1 patient; 3 families, 2; 7 families, 3; 4 families, 4; 2 families, 5.

Number of cities and towns in which patients are boarded, 5, a decrease of 1. Largest number of patients in any one town, 48; of families, 19.

The general statistics for the year are as follows: —

	1916.			INCREASE FOR THE YEAR.		
	Males.	Females.	Totals.	Males.	Females.	Totals.
Remaining Sept. 30, 1915,	1	85	86	11 ¹	205 ¹	216
Admitted within the year,	-	30	30	1 ¹	23	22
By transfer from institutions,	-	30	30	-	25	25
Nominally admitted from visit, for discharge,	-	-	-	1 ¹	2 ¹	3 ¹
Whole number of cases within the year,	1	115	116	12 ¹	182 ¹	194 ¹
Dismissed within the year,	1	51	52	11 ¹	161 ¹	172 ¹
Viz.: Discharged,	-	3	3	2 ¹	9 ¹	11 ¹
Capable of self-support,	-	1	1	2 ¹	7 ¹	9 ¹
Requiring further care,	-	2	2	-	2 ¹	2 ¹
Transferred to institutions,	-	14	14	2 ¹	15 ¹	17 ¹
Unsuitable,	-	6	6	1 ¹	5 ¹	6 ¹
Temporarily,	-	4	4	1 ¹	5 ¹	6 ¹
Ill,	-	4	4	-	5 ¹	5 ¹
Transferred to family care by trustees,	1	33	34	7 ¹	137 ¹	144 ¹
Died,	-	1	1	-	-	-
Remaining Sept. 30, 1916,	-	64	64	1 ¹	21 ¹	22 ¹
Viz.: Supported by State,	-	60	60	1 ¹	15 ¹	16 ¹
Reimbursing,	-	1	1	-	4 ¹	4 ¹
Private,	-	2	2	-	1 ¹	1 ¹
Self-supporting,	-	1	1	-	1 ¹	1 ¹
Number of different persons within the year,	1	114	115	11 ¹	180 ¹	191 ¹
Number of different persons admitted,	-	30	30	-	25	25
Number of different persons dismissed,	1	51	52	10 ¹	159 ¹	169 ¹
Daily average number, . . . . .	.17	73.45	73.62	3.95 ¹	68.26 ¹	72.21 ¹
State, . . . . .	.17	69.45	69.62	2.25 ¹	51.50 ¹	53.75 ¹
Reimbursing,	-	1.00	1.00	-	7.11 ¹	7.11 ¹
Private,	-	2.00	2.00	.25 ¹	2.47 ¹	2.72 ¹
Self-supporting,	-	1.00	1.00	1.20 ¹	5.27 ¹	6.47 ¹
Living with friends without public aid,	-	-	-	.25 ¹	1.91 ¹	2.16 ¹

¹ Decrease.

The total and weekly per capita expenditures of the State on account of patients in private families for the year ending Nov. 30, 1916, and since Oct. 1, 1889, are shown, as follows:—

	Fiscal Year ending Nov. 30, 1916.	Since Oct. 1, 1889.
Payments for board,	\$10,210 10	\$676,135 44
Average number of patients, exclusive of private patients, .	64.54	194.29
Weekly per capita cost of board,	\$3 04	\$2 45
Payments for extra clothing, not included in board rate, . .	\$35 39	\$2,570 92
Payments for medical attendance, etc., not included in board rate,	\$10 50	\$4,681 80
Weekly per capita cost of such expenses, outside of board rate,	\$0 01	\$0 02
Weekly per capita cost of support (being cost of board, clothing, medical attendance, etc.).	\$3 05	\$2 49
Payments for supervision (being transportation, salaries and expenses of visitors).	\$1,643 28	\$86,618 05
Average number of patients,	66.54	201.02
Weekly per capita cost of supervision,	\$0 47	\$0 30
Weekly per capita cost of support and supervision, . .	\$3 51	\$2 79

UNDER TRUSTEES.

The trustees of institutions were authorized, by chapter 458 of the Acts of 1905, to place their patients in the care of private families under substantially the same conditions as the Commission.

First patient boarded June 13, 1905. Since placed, 542 different patients.

Number in families Oct. 1, 1916, 334, — 35 men and 299 women.

Placed during the year, 230 persons, a decrease of 67.

Daily average number for the year, 341.

Number of families having patients, 156, an increase of 2; 81 families having 1 patient each; 20 families, 2; 24 families, 3; 18 families, 4; 9 families, 5; 4 families, 6.

Number of towns in which patients are boarded, 72, a decrease of 1. Largest number of patients in any one town, 48; of families, 13.

The general statistics for the year are as follows: —

	Worcester Hospital.	Taunton Hospital.	Northampton Hospital.	Danvers Hospital.	West-borough Hospital.	Boston Hospital.	Grafton Hospital.	Medfield Hospital.	Gardner Colony.	Fox-borough Hospital.	Totals.
Remaining Sept. 30, 1915,	47	64	35	12	62	10	27	29	30	1	317
Men,	2	10	3	—	2	1	1	1	7	—	27
Women,	45	54	32	12	60	9	26	28	23	1	290
Admitted within the year,	34	12	35	22	32	13	37	17	50	—	252
Men,	1	—	3	1	2	2	—	—	15	—	23
Women,	33	12	32	21	30	12	37	17	35	—	229
Whole number of cases within the year,	81	76	70	34	94	23	64	46	80	1	569
Dismissed within the year,	34	18	33	11	40	15	35	13	35	1	235
Men,	2	2	1	—	3	—	1	—	6	—	15
Women,	32	16	32	11	37	15	34	13	29	1	220
Viz.: Returned to institutions,	29	17	33	10	37	10	31	12	34	1	214
Men,	2	2	1	—	3	—	—	—	6	—	14
Women,	27	15	32	10	34	10	31	12	28	1	200
Discharged,	2	—	—	—	2	2	1	—	1	—	8
Men,	—	—	—	—	—	—	—	—	—	—	—
Women,	2	—	—	—	2	2	1	—	1	—	8
Died,	—	—	—	1	—	—	—	—	—	—	1
Men,	—	—	—	—	—	—	—	—	—	—	—
Women,	—	—	—	1	—	—	—	—	—	—	1
On visit Sept. 30, 1916,	1	1	—	1	1	3	1	1	—	—	7
On escape Sept. 30, 1916,	2	—	—	—	—	—	2	1	—	—	5
Remaining Sept. 30, 1916,	47	58	37	23	54	8	29	33	45	—	334
Men,	1	8	5	1	1	2	—	1	16	—	35
Women,	46	50	32	22	53	6	29	32	29	—	299
Supported by the State,	37	47	26	19	49	8	29	33	38	—	286
Private,	5	—	—	2	5	—	—	—	19	—	29
Self-supporting,	5	11	4	2	—	—	—	—	7	—	29
Daily average number,	49.55	61.54	34.46	20.29	61.08	12.96	33.14	31.40	35.94	0.19	340.55
Men,	1.35	8.30	3.21	0.85	1.23	1.63	0.75	1.00	10.63	—	23.95
Women,	48.20	53.24	31.25	19.44	59.85	11.33	32.39	30.40	25.31	0.19	311.60
State,	40.49	50.24	24.62	16.08	54.63	12.08	33.14	31.40	32.40	0.19	295.27
Private,	3.92	—	5.98	1.36	6.45	0.81	—	—	—	—	18.52
Self-supporting,	5.14	11.30	3.86	2.85	—	0.07	—	—	3.54	—	26.76
Number of different persons within the year,	75	71	43	32	88	23	53	43	72	1	501
Number of different persons admitted within the year,	32	12	33	20	31	15	29	13	45	—	230
Number of different persons dismissed within the year,	30	18	29	10	36	15	28	13	31	1	211

THE COMMISSION.

PROCEEDINGS.

Forty-four meetings of the former State Board of Insanity were held and eight meetings of the Commission.

One hundred and thirty-eight visits of inspection were made by the Board and Commission, in addition to 1,547 by the assistants to the director, pathologist, assistant pathologists, the financial agent and the director of industries.

Twenty-six visits were made to the institutions relative to deportation matters by the assistants to the director. One hundred and thirteen visits relative to matters of support were made to institutions by agents of the support department.

Careful attention has been paid to all complaints as to commitment, discharge, death or treatment of patients.

Dr. Samuel W. Crittenden was appointed Oct. 10, 1916, as assistant to the director.

New licenses were granted during the year, as shown on page 121.

PLANS AND SPECIFICATIONS.

The following construction was authorized by the Legislature of 1916, plans and specifications in each case having been examined and approved: —

Worcester Hospital. — Constructing building for 50 patients at Hillside Farm (Resolves, chapter 126) approved Nov. 17, 1915.

Northampton Hospital. — Alteration of laundry for use as dining room for employees (Resolves, chapter 124) approved Nov. 17, 1915.

Westborough Hospital. — Remodeling female wards Nos. 1, 2, 4 and 5 (Resolves, chapter 125) approved Nov. 17, 1915.

Danvers Hospital. — Constructing nurses' home to accommodate 60 men and married couples (Resolves, chapter 120) approved Nov. 17, 1915.

Boston Hospital. — Constructing women's custodial building to accommodate 150 patients and four nurses (Resolves, chapter 132) approved Nov. 17, 1915. Extension of sewer and water service (Resolves, chapter 132) approved Nov. 17, 1915. Con-

structing fire escapes (Resolves, chapter 132) approved Nov. 17, 1915. Constructing piggery (Resolves, chapter 132) approved Nov. 17, 1915.

Gardner Colony. — Constructing building for 10 disturbed patients and 2 nurses (Resolves, chapter 122) approved Nov. 17, 1915.

Foxborough Hospital. — Constructing building to accommodate 75 acutely insane patients (Resolves, chapter 121) approved Nov. 17, 1915. Constructing corridors to connect with corridors under construction (Resolves, chapter 121) approved Nov. 17, 1915. Constructing cottage to accommodate 22 nurses (Resolves, chapter 121) approved Nov. 17, 1915. Constructing coal trestle (Resolves, chapter 121) approved Nov. 17, 1915.

Massachusetts School for the Feeble-minded. — Constructing recreation building (Resolves, chapter 127) approved Nov. 17, 1915.

Wrentham School. — Constructing dormitory to accommodate 105 inmates (Resolves, chapter 140) approved Nov. 17, 1915. Constructing vegetable cellar (Resolves, chapter 140) approved Nov. 17, 1915. Addition to laundry building (Resolves, chapter 140) approved Nov. 17, 1915.

In addition to the above the Legislature authorized certain construction for the proposed school for the feeble-minded at Belchertown, plans and specifications to be prepared later.

ESTIMATES OF STATE EXPENSES FOR 1916

on account of the insane, feeble-minded and epileptic amount to \$6,252,208.95, excluding estimates for maintenance of the insane department of the State Infirmary and the Bridgewater State Hospital, whose estimates are inseparable from those of the institutions as a whole which are supervised by the State Board of Charity. They comprise estimates by the State Board and by the State institutions.

ESTIMATES BY THE MASSACHUSETTS COMMISSION ON MENTAL DISEASES.

For salaries of officers and employees,	\$58,000
For traveling, office and contingent expenses, including the printing and binding of the annual report,	18,500

For transportation and medical examination of State charges under the supervision of the Commission,	\$10,000
For the support of State charges boarded out in families under the supervision of the Commission, or temporarily absent under authority of same,	10,500
For the support of epileptic State charges in the Hospital Cottages for Children,	10,000
For investigation as to the nature, causes, results and treatment of mental disease and defect, and the publication of the results thereof,	5,000
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	\$112,000

ESTIMATES FOR STATE INSTITUTIONS

relate (1) to maintenance expenses, inclusive of repairs and improvements, and (2) to special expenditures for new buildings, additions, new furnishings and equipment in the main.

ESTIMATES FOR MAINTENANCE EXPENSES

of the State institutions have been approved by the Commission, as follows: —

Comparative Estimates for Maintenance, 1917, as approved by Commission.

INSTITUTIONS.	AVERAGE NUMBER OF PATIENTS. ¹		Salaries, Wages and Labor.	Religious Instruction.	Travel, Transportation, etc.	Food.	Clothing and Materials.	Furnishings and Household Supplies.
	1917 (estimated).	1916.						
Worcester Hospital,	1,585	1,508	\$104,000 00	\$1,232 00	\$6,500 00	\$112,000 00	\$7,775 00	\$30,480 00
Taunton Hospital,	1,375	1,342	146,000 00	1,850 00	8,000 00	92,218 75	13,151 75	22,300 00
Northampton Hospital,	1,005	978	109,761 00	1,325 00	5,000 00	72,493 00	6,500 00	10,500 00
Danvers Hospital,	1,520	1,529	168,000 00	1,100 00	8,500 00	107,000 00	9,500 00	22,000 00
Westborough Hospital,	1,320	1,329	165,000 00	1,600 00	6,440 00	94,345 00	9,000 00	19,800 00
Boston Hospital,	1,623	1,621	232,000 00	1,514 00	13,800 00	158,000 00	12,848 00	29,800 00
Grafton Hospital,	1,940	1,686	188,000 00	2,500 00	12,000 00	140,000 00	15,987 00	35,148 00
Medfield Hospital,	1,695	1,640	179,000 00	1,532 00	4,000 00	138,000 00	21,922 00	21,025 00
Gardner Colony,	845	785	79,000 00	1,200 00	4,700 00	38,583 00	10,000 00	10,000 00
Monson Hospital,	1,035	1,001	130,000 00	1,588 00	4,200 00	79,412 00	7,500 00	13,000 00
Foxborough Hospital,	360	333	66,000 00	1,368 00	3,150 00	31,000 00	4,000 00	7,000 00
Massachusetts School for the Feeble-minded,	1,620	1,601	135,809 73	2,200 00	5,000 00	89,520 00	20,000 00	21,000 00
Wrentham School,	1,150	998	86,000 00	1,445 72	6,489 00	70,785 00	18,000 00	9,835 00
Totals,	17,073	16,351	\$1,838,570 73	\$20,454 72	\$87,779 00	\$1,223,356 75	\$156,133 75	\$251,888 00

¹ Includes patients in family care under trustees.

Comparative Estimates for Maintenance, 1917, as approved by Commission — Concluded.

INSTITUTIONS.	Medical and General Care.	Heat, Light and Power.	Farm and Stable.	Grounds.	Repairs, Ordinary.	Repairs and Renewals.	Totals.
Worcester Hospital,	\$23,000 00	\$37,578 00	\$18,000 00	—	\$15,800 00	—	\$416,365 00
Taunton Hospital,	24,000 00	42,000 00	25,000 00	\$1,000 00	8,000 00	\$12,000 00	395,520 50
Northampton Hospital,	12,000 00	14,617 00	19,903 00	—	10,000 00	2,047 00	264,146 00
Danvers Hospital,	20,000 00	44,000 00	25,000 00	1,000 00	26,000 00	11,000 00	443,100 00
Westborough Hospital,	18,000 00	43,000 00	23,000 00	—	8,500 00	18,000 00	406,685 00
Boston Hospital,	21,000 00	49,332 00	7,635 00	1,000 00	15,000 00	1,478 00	543,407 00
Grafton Hospital,	16,555 00	42,770 00	21,575 00	190 00	13,965 00	4,510 00	493,200 00
Medfield Hospital,	14,000 00	32,000 00	26,361 00	200 00	11,000 00	3,024 00	452,064 00
Gardner Colony,	14,500 00	16,000 00	20,000 00	850 00	11,000 00	7,275 00	213,108 00
Monson Hospital,	8,500 00	28,400 00	13,500 00	—	8,000 00	3,000 00	287,100 00
Foxborough Hospital,	6,495 00	14,260 00	9,000 00	600 00	4,500 00	1,298 00	148,671 00
Massachusetts School for the Feeble-minded,	9,900 00	27,000 00	39,500 00	—	11,400 00	10,853 00	372,182 73
Wrentham School,	6,000 00	25,000 00	19,000 00	225 00	8,000 00	3,885 00	254,664 72
Totals,	\$193,950 00	\$415,957 00	\$267,474 00	\$5,065 00	\$151,165 00	\$78,370 00	\$4,690,213 95

ESTIMATES FOR SPECIAL APPROPRIATIONS

for the State institutions under the supervision of this Commission, together with plans and specifications, have been prepared, and are classified below.

Worcester State Hospital.

Water supply for Shrewsbury Colony,	\$11,385
Sewage-disposal system for Shrewsbury Colony,	8,993
Renovating plumbing, eight wards,	10,000
Connecting sewage system with that of city of Worcester,	9,000
	<hr/>
	\$39,378

Northampton State Hospital.

Completion of vacuum system,	\$1,760
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Danvers State Hospital.

Constructing coal trestle,	\$13,000
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Westborough State Hospital.

Constructing and furnishing infirmary building for 150 men,	\$189,500
Renovation of female wards 1, 2, 4 and 5,	42,000
Extension of water main,	3,000
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	\$234,500

Boston State Hospital.

Constructing and furnishing male infirmary building to accommodate 324 patients and 30 nurses,	\$345,000
Constructing and furnishing nurses' home, west group, to accommodate 84 nurses,	70,000
Constructing interior fire escapes,	2,832
Alterations in north wing, Fisher building,	10,000
Purchase of two boilers,	6,000
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	\$433,832

Grafton State Hospital.

Remodeling heating plant in Summer Street, Worcester Department,	\$63,000
Constructing coal trestle and track scales,	10,900
Installation of refrigerating apparatus in storehouse at Grafton,	9,000
Purchase of combination chemical and hose wagon, Grafton department,	2,500

Sewage connections, power house, carpenter shop and store-house, Grafton department,	\$1,250
Fire protection, fire escapes, etc.,	12,125
Purchase of laundry machinery,	7,000
For new water system at Grafton,	25,000
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	\$130,775

Medfield State Hospital.

Repairing and enlarging sewage filter beds,	\$24,250
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Gardner State Colony.

Changes in heating plant,	\$3,000
Constructing and furnishing building for 10 disturbed patients,	7,500
Purchase of land,	3,500
Laundry equipment,	5,000
	<hr/>
	\$19,000

Monson State Hospital.

Purchase of electrical equipment,	\$5,000
Extension of dining room,	33,000
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	\$38,000

Foxborough State Hospital.

Constructing and furnishing a central service building,	\$164,000
Constructing and furnishing acute male receiving ward to accommodate 74 patients,	93,000
Constructing and furnishing male ward to accommodate 100 patients,	103,000
Constructing sewage filter beds,	17,500
	<hr/>
	\$377,500

Wrentham State School.

Constructing and furnishing assembly hall,	\$57,000
Constructing and furnishing industrial building for boys,	24,000
Purchase of Wood property,	2,000
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	\$83,000

Proposed School for the Feeble-minded at Belchertown.

Heat, light and power plant,	\$40,000
Purchase of additional land,	15,000
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	\$55,000

SUMMARY OF RECOMMENDATIONS FOR SPECIAL APPROPRIATIONS.

Insane.

Constructing, furnishing and equipping buildings for patients and nurses,	\$808,000
Number of patients provided for,	658
Average per capita cost,	\$1,077 14
Number of nurses provided for,	114
Average per capita cost,	\$870 50
Patients and nurses provided for,	772
Average per capita cost,	\$1,046 63
Land, buildings for officers and employees and for administrative purposes, including furnishing and equipment, improvements and repairs,	484,995
Total,	\$1,292,995

Feeble-minded.

Land, buildings for officers and employees and for administrative purposes, including furnishing and equipment, improvements and repairs,	\$138,000
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Epileptic (Sane).

Land, buildings for officers and employees and for administrative purposes, including furnishing and equipment, improvements and repairs,	\$19,000
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All classes.

Constructing, furnishing and equipping buildings for patients and nurses,	\$808,000
Number of patients provided for,	658
Average per capita cost,	\$1,077 14
Number of nurses provided for,	114
Average per capita cost,	\$870 50
Patients and nurses provided for,	772
Average per capita cost,	\$1,046 63
Land, buildings for officers and employees and for administrative purposes, including furnishing and equipment, improvements and repairs,	641,995
Total	\$1,449,995

FINANCIAL STATEMENT.

Financial Statement of the Commission for the Fiscal Year ending Nov. 30, 1916.

APPROPRIATIONS AND RECEIPTS.							
	Appropriations.	CASH RECEIPTS ON ACCOUNT OF —				Totals.	
		Family Care.	State Institutions.	Refunds.	Interest on Bank Account.		Licenses for Private Hospitals.
Traveling, office and contingent expenses,	\$10,000 00	—	—	\$36 90	—	—	\$10,036 90
Salaries and wages of officers and employees,	59,000 00	—	—	—	—	—	59,000 00
Transportation and medical examination of State charges,	8,500 00	—	—	147 18	—	—	8,647 18
Support of State charges boarded out in families,	13,000 00	—	—	—	—	—	13,000 00
Support of State charges in Hospital Cottages for Children,	10,000 00	—	—	—	—	—	10,000 00
For investigation as to the nature, causes, results and treatment of mental disease and defect and the publication of the results thereof.	5,000 00	—	—	3 25	—	—	5,003 25
Transferred from the appropriation for extraordinary expenses, chapter 613, Acts of 1908, and chapter 535, Acts of 1909, to the appropriation for the payment of damages and other expenses incurred in the taking of land for the Boston State Hospital, chapter 65, Resolves of 1911.	758 51	—	—	—	—	—	758 51
Cash received in reimbursement for the support of patients and for licenses for private hospitals.	—	\$770 34	\$50,983 72	—	\$58 90	\$237 50	52,050 46
	\$106,258 51	\$770 34	\$50,983 72	\$187 33	\$58 90	\$237 50	\$158,496 30

Financial Statement of the Commission for the Fiscal Year ending Nov. 30, 1916 — Concluded.

	EXPENDITURES AND REMITTANCES.				
	Expenditures from Appropriations.	Balance.	Paid to State Institutions.	Paid to State Treasurer.	Totals.
Traveling, office and contingent expenses,	\$9,510 96	\$525 04	-	-	\$10,036 90
Salaries and wages of officers and employees,	56,444 38	2,555 02	-	-	59,000 00
Transportation and medical examination of State charges,	7,319 29	1,327 89	-	-	8,647 18
Support of State charges boarded out in families,	10,255 99	2,744 01	-	-	13,000 00
Support of State charges in Hospital Cottages for Children,	9,170 05	823 35	-	-	10,000 00
For investigation as to the nature, causes, results and treatment of mental disease and defect and the publication of the results thereof.	5,003 25	-	-	-	5,003 25
Transferred from the appropriation for extraordinary expenses, chapter 613, Acts of 1908, and chapter 535, Acts of 1909, to the appropriation for the payment of damages and other expenses incurred in the taking of land for the Boston State Hospital, chapter 65, Resolves 1911.	758 51	-	-	-	758 51
Payments of cash received in reimbursement for the support of patients and for licenses for private hospitals.	-	-	\$50,983 72	\$1,066 74	52,050 46
	\$98,469 03	\$7,876 81	\$50,983 72	\$1,066 74	\$158,496 30

FAMILY CARE OF THE INSANE.

Under chapter 504, section 71, Acts of 1909, the Commission places in private families certain suitable inmates of the institutions under its supervision. For a full report of this work as conducted by the Commission and by the trustees of certain institutions, see page 124.

THE SUPPORT DEPARTMENT.

It is the duty of this department to ascertain whether the patients committed to the various State hospitals for the insane, and also the institutions for the epileptic and feeble-minded, as public charges have a legal right to remain in said institutions. If they are aliens and have no such right, and have landed in the United States within three years of their commitment, investigation is made as to the liability of their deportation by the United States Immigration authorities, and the result of such investigation is reported to the deportation department of the Board. If in the United States more than three years and in Massachusetts less than five years, such aliens are reported to the deportation department for deportation by this Commission. Under the provisions of section 69 of chapter 504 of the Acts of 1909 "the board may also remove any pauper inmates of institutions under its supervision who are not subject to the orders of a court to any country, State or place where they belong." If native-born and having no claim upon this Commonwealth for support, investigation is made to determine upon what State, if any, they have a claim, and when so determined this is also reported to the deportation department for their action.

The financial condition of those entitled to remain is investigated, and if there are means legally available and sufficient to warrant it, the patient is reported to the hospital, to be supported privately at a rate to be determined by the hospital authorities. If the means are not sufficient for that purpose, a reimbursing rate is made by this department and submitted to the Commission for approval.

The following statement shows the detail work of the department: —

Visits to the hospitals,	114
Histories taken at the hospitals,	3,360
Visits to relatives of patients and others for investigation,	1,751
Cases submitted for deportation by the United States Commission of Immigration,	120
Cases submitted for deportation by the Commission (and Board),	207

Support Cases.

Cases pending Nov. 30, 1915,	342
New cases,	832
	— 1,174
Made private,	118
Made reimbursing,	387
Accepted as State charges,	235
Pending Nov. 30, 1916,	434
	— 1,174

Private Cases.

Cases pending Nov. 30, 1915,	22
New cases reported to hospitals,	131
	— 153
Reported by hospitals as having been made private,	118
Made reimbursing,	7
Dropped, accepted as State charges,	9
Pending Nov. 30, 1916,	19
	— 153

Reimbursing Cases.

Cases remaining Nov. 30, 1915,	800
New cases,	387
	— 1,187
Made private of the above,	9
Died,	114
Discharged or on visit Nov. 30, 1915,	164
Dropped, accepted as State charges,	74
Remaining in hospitals Nov. 30, 1915,	826
	— 1,187

Number and Board Rates of Reimbursing Patients for the Year ending Sept. 30, 1916.

INSTITUTIONS.			DAILY AVERAGE NUMBER.		Average Weekly Per Capita Rate.	NUMBER OCT. 1, 1916.		UNITED STATES DEPARTMENT CASES.	
			Males.	Females.		Males.	Females.	Daily Average Number.	Average Weekly Per Capita.
Worcester Hospital,	.	.	33.22	64.83	\$3.31	30	63	-	-
Taunton Hospital,	.	.	33.75	58.49	3.58	32	46	-	-
Northampton Hospital,	.	.	40.47	62.50	3.33	34	55	-	-
Danvers Hospital,	.	.	38.31	90.27	3.41	43	92	-	-
Westborough Hospital,	.	.	30.72	61.49	3.24	28	81	-	-
Boston Hospital,	.	.	27.68	80.02	3.53	34	83	.48	\$14.00
Grafton Hospital,	.	.	24.37	40.19	3.42	20	30	-	-
Medfield Hospital,	.	.	16.57	34.61	2.81	8	38	-	-
Monson Hospital,	.	.	8.58	17.73	2.90	16	20	-	-
Gardner Colony,	.	.	9.91	3.40	3.72	8	6	-	-
Mental Wards, State Infirmary,	.	.	-	3.72	3.18	-	5	-	-
Foxborough Hospital,	.	.	12.02	3.08	3.54	6	2	-	-
Bridgewater Hospital,	.	.	4.28	-	4.34	7	-	1.25	5.00
Massachusetts School for Feeble-minded,	.	.	2.47	3.28	3.12	4	4	-	-
Wrentham School,	.	.	1.48	3.99	2.25	2	4	-	-
Family care,	.	.	-	6.31	2.74	-	1	-	-
Totals,	.	.	283.78	533.91	\$3.35	272	530	1.73	-

Receipts for Support of Reimbursing Patients.

LOCATION OF PATIENTS.	Year ending Nov. 30, 1915.	Year ending Nov. 30, 1916.	Total since Jan. 1, 1904.
Worcester Hospital,	\$16,305 27	\$16,866 23	\$208,678 26
Taunton Hospital,	16,950 52	14,479 01	160,958 00
Northampton Hospital,	16,140 57	17,428 77	167,352 82
Danvers Hospital,	25,356 61	23,481 03	272,282 46
Westborough Hospital,	14,992 00	15,850 33	165,585 64
Boston Hospital,	16,201 58	19,789 65	101,143 56
Grafton Hospital,	11,883 09	11,227 73	88,922 31
Medfield Hospital,	8,409 77	7,845 18	104,893 59
Gardner Colony,	1,356 51	2,793 92	14,755 07
Mental Wards, State Infirmary,	519 47	394 16	12,094 56
Bridgewater Hospital,	839 01	2,226 32	7,956 97
Monson Hospital,	4,527 34	3,951 47	34,666 22
Foxborough Hospital,	2,038 53	2,593 03	11,698 49
Foxborough (labor),	—	—	3,370 45
Massachusetts School for the Feeble-minded,	1,913 96	1,298 43	8,825 95
Wrentham School,	1,081 32	589 58	4,065 73
Hospital Cottages,	—	—	673 37
Family care,	859 78	770 34	12,605 07
Almshouses,	—	—	923 66
	\$139,375 33	\$141,585 18	\$1,381,452 18

DEPORTATIONS.

There were considered for deportation 540 cases, compared with 468 for the previous year. The Commission deported 98 to other States, 33 to other countries, — in all, 131. In addition, the United States Immigration Commissioner deported 63. Altogether, 194 have been deported since Dec. 1, 1915.

Since Oct. 1, 1898, 2,321 persons have been deported by this department, of whom 73 returned once, 11 twice and 2 four times. Of those returning, 17 are now in institutions in this State.

Details of the disposition of cases under consideration for deportation are shown in the following table:—

	COMMISSION.			UNITED STATES IMMIGRATION COMMISSIONER.			TOTALS.			TOTALS.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	1915.	1916.	Increase.
Cases pending Nov. 30, 1915,	100	23	128	39	24	63	139	52	191	84	191	107
Since reported,	158	73	231	74	44	118	232	117	349	384	349	35 ¹
Total cases under consideration,	258	101	359	113	68	181	371	169	540	468	540	72
Deported,	89	42	131	34	29	63	123	71	194	194	194	-
Viz.: Other States,	67	31	98	-	-	-	67	31	98	91	98	7
Special cases not landed under immigration laws, and pending deportation,	22	11	33	21	19	40	43	30	73	78	73	5 ¹
Discharged,	-	-	-	13	10	23	13	10	23	25	23	2 ¹
Viz.: Care of friends,	18	14	32	14	11	25	32	25	57	47	57	10
Escaped,	11	13	24	7	11	18	18	24	42	29	42	13
Returned to penal institutions,	6	1	7	6	-	6	12	1	13	14	13	1 ¹
Died,	1	2	3	1	-	1	2	-	2	4	2	2 ¹
Withdrawn,	10	2	12	2	2	4	12	4	16	12	16	4
Viz.: Private patients,	-	2	2	6	2	8	6	4	10	3	10	7
Rejected by Immigration Commissioner,	-	2	2	-	-	-	-	2	2	-	2	2
Dropped from further consideration,	7	8	15	-	-	-	7	8	15	3	8	5
Viz.: Impracticable to deport,	5	5	10	-	-	-	5	5	10	21	15	6 ¹
No place to go,	2	3	5	-	-	-	2	3	5	9	10	1
Total cases closed,	124	68	192	56	44	100	180	112	292	277	292	15
Cases pending Nov. 30, 1916,	134	33	167	57	24	81	191	57	248	191	248	57
Viz.: Under sentence,	9	9	18	-	-	-	9	9	18	8	9	1
Not in condition to deport,	2	5	7	-	-	-	2	5	7	15	7	8 ¹
Awaiting action,	26	10	36	8	3	11	34	13	47	52	47	5 ¹
Delayed because of war conditions,	97	18	115	49	21	70	146	39	185	116	185	69

¹ Decrease.

TRANSFERS.

Seven hundred and sixty-two patients have been transferred within the year; 642 between public institutions; 277 between public institutions and families; 36 between public and private institutions; and 7 between private institutions.

THE FINANCIAL DEPARTMENT.

The following is submitted as the report of the financial department for the twelve months ending Nov. 30, 1916.

The summarized financial operations of the Commission and its group of institutions consist of the expenditure of \$4,565,081 and the receipt of \$401,237.

The expenditures are divided as follows:—

By the Commission on Mental Diseases for office expenses, travel, transportation, board of patients, etc., \$98,469 (see table on page 137).

By the Commission for construction work, \$413,880 (Special Appropriations, see table on page 265).¹

By the institutions for maintenance, \$4,052,732 (for minute detail see table on page 254).

SPECIAL APPROPRIATIONS.

Following is a statement of activities for the fiscal year:—

Worcester State Hospital.

Constructing and furnishing building for 50 patients at Hillside Farm:—

Original appropriation,	\$20,000 00	
Amount of expenditures,	17,253 92	
Balance Dec. 1, 1916,	—————	\$2,746 08

Northampton State Hospital.

Alteration of a laundry for use as dining room for employees:—

Original appropriation,	\$2,300 00	
Amount of expenditures,	1,040 04	
Balance Dec. 1, 1916,	—————	1,259 96

Installation of vacuum system:—

Original appropriation,	\$1,200 00	
Amount of expenditures,	1,175 13	
Balance Dec. 1, 1916,	—————	24 87

¹ A small part of this expenditure was made by the institutions.

Danvers State Hospital.

Purchase of 8 acres of land:—

Original appropriation,	\$800 00	
Expenditures,	—	
Balance Dec. 1, 1916,		\$800 00

Erection of storehouse and service building:—

Original appropriation,	\$47,000 00	
Sum of expenditures and contracts let,	40,011 01	
Balance Dec. 1, 1916,		6,988 99

Erection of a nurses' home:—

Original appropriation,	\$50,000 00	
Sum of expenditures and contracts let,	39,475 96	
Balance Dec. 1, 1916,		10,524 04

Westborough State Hospital.

Renovation of female wards:—

Original appropriation,	\$15,000 00	
Amount of expenditures,	4 56	
Balance Dec. 1, 1916,		14,995 44

Boston State Hospital.

Constructing and furnishing a women's custodial building:—

Original appropriation,	\$140,000 00	
Amount of expenditures and contracts let,	125,727 15	
Balance Dec. 1, 1916,		14,272 85

Fire alarm and protection:—

Original appropriation,	\$2,500 00	
Amount of expenditures,	508 85	
Balance Dec. 1, 1916,		1,991 15

Fire escapes:—

Original appropriation,	\$1,683 00	
Amount of expenditures,	—	
Balance Dec. 1, 1916,		1,683 00

Construction of piggery:—

Original appropriation,	\$1,800 00	
Amount of expenditures,	1,684 00	
Balance Dec. 1, 1916,		116 00

Extension of sewer and water service:—

Original appropriation,	\$5,000 00	
Amount of expenditures,	2,549 00	
Balance Dec. 1, 1916,		2,451 00

Grafton State Hospital.

Furnishing administration building:—

Original appropriation,	\$3,000 00	
Amount of expenditures,	2,865 31	
Balance Dec. 1, 1916,		134 69

Grafton Hospital — Con.

Installation of heat from central plant: —

Original appropriation,	\$23,000 00	
Amount of expenditures,	21,408 07	
Balance Dec. 1, 1916,	<u> </u>	\$1,591 93

Furnishing kitchen and service building at the Oaks: —

Original appropriation,	\$5,000 00	
Amount of expenditures,	2,860 40	
Balance Dec. 1, 1916,	<u> </u>	2,139 60

Furnishing infirmary building at the Elms: —

Original appropriation,	\$1,000 00	
Amount of expenditures,	993 72	
Balance Dec. 1, 1916,	<u> </u>	6 28

Artesian wells: —

Original appropriation,	\$700 00	
Amount of expenditures,	—	
Balance Dec. 1, 1916,	<u> </u>	700 00

Dining room and service building: —

Original appropriation,	\$62,000 00	
Amount of expenditures,	61,727 55	
Balance Dec. 1, 1916,	<u> </u>	272 45

Medfield Hospital.

Dispensary building: —

Original appropriation,	\$25,000 00	
Amount of expenditures and contracts let,	24,662 50	
Balance Dec. 1, 1916,	<u> </u>	337 50

Purchase of land: —

Original appropriation,	\$8,000 00	
Amount of expenditures,	6,739 77	
Balance Dec. 1, 1916,	<u> </u>	\$1,260 23

Gardner Colony.

Building for disturbed patients: —

Original appropriation,	\$7,500 00	
Amount of expenditures,	5,082 65	
Balance Dec. 1, 1916,	<u> </u>	2,417 35

Extension of water supply: —

Original appropriation,	\$2,000 00	
Amount of expenditures,	1,040 93	
Balance Dec. 1, 1916,	<u> </u>	959 07

Monson Hospital.

Increasing supply of surface water: —

Original appropriation,	\$4,000 00	
Amount of expenditures,	3,063 32	
Balance Dec. 1, 1916,	<u> </u>	936 68

Foxborough Hospital.

Construction of corridors: —

Original appropriation,	\$12,000 00	
Amount of expenditures and contracts let,	6,169 03	
Balance Dec. 1, 1916,	<u> </u>	\$5,830 97

Construction and repairs of corridors: —

Original appropriation,	\$49,000 00	
Amount of expenditures and contracts let,	42,414 50	
Balance Dec. 1, 1916,	<u> </u>	6,585 50

Building to accommodate 75 acutely insane patients: —

Original appropriation,	\$70,000 00	
Amount of expenditures and contracts let,	62,453 00	
Balance Dec. 1, 1916,	<u> </u>	7,547 00

Construction of cottage for 22 nurses: —

Original appropriation,	\$13,000 00	
Amount of expenditures,	11,706 09	
Balance Dec. 1, 1916,	<u> </u>	1,293 91

Construction of coal trestle: —

Original appropriation,	\$4,000 00	
Amount of expenditures,	2,840 28	
Balance Dec. 1, 1916,	<u> </u>	1,159 72

Renovation of wards: —

Original appropriation,	\$13,200 00	
Amount of expenditures,	—	
Balance Dec. 1, 1916,	<u> </u>	13,200 00

Massachusetts School for the Feeble-minded.

Recreation building: —

Original appropriation,	\$23,700 00	
Amount of expenditures,	20,241 52	
Balance Dec. 1, 1916,	<u> </u>	3,458 48

Barn, silo and hay barn (1915 appropriation): —

Original appropriation,	\$3,500 00	
Amount of expenditures,	3,212 53	
Balance Dec. 1, 1916,	<u> </u>	287 47

Cottage for 15 patients: —

Original appropriation,	\$3,500 00	
Amount of expenditures,	3,181 59	
Balance Dec. 1, 1916,	<u> </u>	318 41

Wrentham School.

Home for 22 employees: —

Original appropriation,	\$14,500 00	
Amount of expenditures,	11,788 15	
Balance Dec. 1, 1916,	<u> </u>	2,711 85

Wrentham School — Con.

Erection of dormitory G: —

Original appropriation,	\$56,000 00	
Amount of expenditures,	206 78	
Balance Dec. 1, 1916,	—————	\$55,793 22

Constructing vegetable cellar: —

Original appropriation,	\$4,800 00	
Expenditures,	3,175 71	
Balance Dec. 1, 1916,	—————	1,624 29

Erection of dormitory O: —

Original appropriation,	\$51,000 00	
Amount of expenditures,	43,747 53	
Balance Dec. 1, 1916,	—————	7,252 47

Farmer's cottage: —

Original appropriation,	\$3,600 00	
Amount of expenditures,	1,415 80	
Balance Dec. 1, 1916,	—————	2,184 20

Laundry building and new machinery: —

Original appropriation,	\$5,160 00	
Amount of expenditures,	4,017 00	
Balance Dec. 1, 1916,	—————	1,143 00

School for Feeble-minded in Western Part of the State.

Purchase of land and preparation of plans: —

Original appropriation,	\$50,000 00	
Amount of expenditures,	49,497 76	
Balance Dec. 1, 1916,	—————	302 24

Hospital for the Insane, Metropolitan District.

Original appropriation,	\$115,000 00	
Amount of expenditures,	114,825 43	
Balance Dec. 1, 1916,	—————	174 57

The foregoing detail shows considerable activity on special appropriations, but it is noticeable that very little of it is concerned with the construction of new buildings, particularly those classes of buildings which are common to the entire group of institutions or any considerable part of the group. The Commission has, therefore, almost entirely lacked an opportunity to work on the very interesting study of standards or types of buildings.

Until some Legislature grants sums for building operations of this nature, the full possibilities of standardization and its value or fallacy as applied to new construction work may not be demonstrated.

However, valuable lessons have begun to be learned and interesting results are being obtained in the preparation of speci-

fications and the establishment of common types of material which are purchased by the Commission.

One who gives the question of standards in constructional and mechanical supplies for a group of consumers geographically remote from each other is practically certain to draw the initial conclusion that nearly everything may be made uniform. He bases this conclusion on the knowledge that the character of the activities is common to all.

As he proceeds to buy the material which enters into this work his belief in universal standards weakens until only a portion of his original idea remains.

In the last year it appears to have been demonstrated that almost every purchase may be made more advantageously if accurate and concise specifications are furnished the seller; also that it is almost always advisable to obtain bids, but it is not apparent that it is advisable in every instance to buy of the lowest bidder. There are several reasons for this. There may be little or no competition. The lowest bidder may be known to be irresponsible financially or slow on his shipments, and although the Commonwealth has adequate legal protection by means of contracts and bonds, the collection of damages for breach of contract is no remedy for the discomfort experienced by patients who are lacking shelter, or for the distress of the authorities whose duty it is to make provision for a reasonably long time in advance of actual needs. Therefore it is wise to select a responsible vendor of good reputation.

Furthermore, in some instances dealers who will not break a trade agreement by offering a low quotation as a bid are at liberty and willing to make considerable concessions in a private informal trade.

Again, there are some orders so small in quantity as to make a request for bids ridiculous.

Thus we may conclude that in almost every instance a good set of specifications should be drawn up; that bids should generally be obtained; that unless there are good reasons to the contrary, the proposition of the low bidder should be accepted; that the adoption of standards is valuable so far as is practicable. This brings us to the question of how far it is practicable.

Two years' buying of these supplies for the group of institutions under the Commission's supervision has led the writer to certain tentative conclusions: —

1. That not all of the many articles needed can be standardized, nor can any standard be made to include each institution at all times.

2. That it is not possible to buy a year's supply for the entire group of institutions at one time and of one person.

Portland cement is a very good illustration. It has been demonstrated that two or three grades are far superior to the many others made. This has been determined by tests made in the Commission's laboratory, supplemented by much other evidence. Therefore one of these grades should be and is the adopted standard so far as possible.

But it cannot be used in every case. For instance, if there is no stock for sale near the point of consumption, then the delay in shipment and the added transportation costs may prohibit its use.

The work to be done with the cement may be joined on to older work in which a different brand of cement has been used, and the difference in color and texture may be an objection.

The application of these remarks might be widely extended and the discussion prolonged indefinitely without adding any strength to the foregoing statement of principles.

It is conclusively evident that when we begin to standardize buildings we shall also automatically standardize the material and parts entering into their construction.

All money spent under special appropriations being new construction should add to the inventory, being, however, offset, and in a measure overcome, by a certain depreciation or deterioration in the value of the property represented by the inventory. This depreciation is the result of the natural process of wearing out which occurs on all property.

The total inventory Nov. 30, 1915, was \$17,610,837.84. The total inventory Nov. 30, 1916, was \$18,136,179.37, or an increase of \$525,341.53. The detail of this is given in Table No. 3, "Inventory of State Institutions."

MAINTENANCE APPROPRIATIONS.

Over this appropriation the Commission has supervision, whereas over the foregoing special appropriations it has direct authority.

The total gross expenditure for maintenance for 1916 was \$4,052,731.80. The total gross weekly per capita cost of maintenance was \$4.77. The net weekly per capita cost in 1915 was \$4.69; in 1916, \$4.74.

The change in per capita analyzes as follows:—

	1916.	CHANGE FROM 1915.	
		Increase.	Decrease.
Salaries, wages and labor,	\$1.94	—	\$0.04
Food,	1.17	\$0.04	—
Clothing, . . . . .	.15	—	—
Furnishings, . . . . .	.23	.03	—
Heat, light and power, . . . . .	.43	.05	—
Repairs and improvements, . . . . .	.20	—	.01
Farm, stable and grounds, . . . . .	.28	—	.02

The foregoing table indicates the greatest changes to be in salaries, wages and labor, and food.

The former decreased because of the scarcity of help and the consequent inability of the institutions to maintain a full roster.

In explanation of the increased food per capita it is only necessary to call attention to the following figures:—

A brief summary is given below of the market conditions in prices of food in 1916 compared with those of 1915.

Average Market Quotation from Boston Chamber of Commerce Bulletin.

	1915.	1916.
Bacon (per pound),	\$0.186	\$0.20
New York hand-picked pea beans (per bushel),	3.260	4.73
Butter, western creamery firsts (per pound), . . . . .	.274	.30
Eggs, western firsts (per dozen), . . . . .	.256	.27
Flour, standard first patent spring (per barrel),	6.930	7.04
Ham (per pound), . . . . .	.146	.19
Mutton (per pound), . . . . .	.092	.10
Potatoes (per bushel), . . . . .	.511	1.18
Salt pork (per barrel),	20.840	25.30
Beef sides (per pound), . . . . .	.129	.14
Sugar, granulated (per hundredweight),	5.580	6.71
Coffee (per pound), . . . . .	.109	.12
Tea (per pound), . . . . .	.183	.18
Molasses (per gallon), . . . . .	.337	.35
Evaporated apples (per pound), . . . . .	.074	.06

The tendency to higher costs was lessened by the fact that the institutions produced \$37 more to the acre than in 1915.

INSTITUTIONS.	Acres of Woodland.	Acres of Mowing.	Acres of Tillage.	VALUE OF FARM PRODUCTION, 1916.					
				Acres of Pasture.	Total Acres, Farm.	Value of Production during the Year.	Value of Produce- tion per Acre, including Woodland.	Value of Produce- tion per Acre, excluding Woodland, and Pasture.	Value of Produce- tion per Acre, excluding Woodland and Pasture.
Worcester Hospital,	182	84	111	65	442	\$48,381 64	\$109 46	\$186 08	\$248 11
Taunton Hospital,	50	92	70	95	307	33,496 97	109 11	130 34	206 77
Northampton Hospital,	93	110	100	185	488	63,432 06	129 98	160 59	302 06
Danvers Hospital,	40	176	79	188	483	66,975 27	138 67	151 19	262 65
Westborough Hospital,	193	43	247	194	677	46,713 52	69 00	96 52	161 08
Boston Hospital,	7	110	57	-	174	17,848 94	102 58	106 88	106 88
Grafton Hospital,	570	78	98	162	908	31,571 08	34 77	93 41	179 38
Medfield Hospital,	283	54	131	66	534	54,137 82	101 38	215 69	292 64
Foxborough Hospital,	20	3	38	21	82	10,993 77	134 07	177 32	268 14
Gardner Colony,	805	120	132	636	1,693	48,452 19	28 62	54 56	192 27
Monson Hospital,	287	152	51	81	571	31,405 35	55 00	110 58	154 71
School for Feeble-minded at Waltham,	1,428	287	-	209	1,924	71,150 76	36 98	143 45	247 91
Wrentham School,	185	39	71	140	435	25,012 71	57 50	100 05	227 39
Totals and averages,	4,143	1,348	1,185	2,042	8,718	\$549,572 08	\$63 04	\$120 13	\$216 97

The daily quantity of food bought per capita is given below. It varies very little from the preceding year.

Meats (ounces),	6.088
Farinaceous foods (ounces),	11.957 ¹
Potatoes (ounces),	9.318
Eggs (ounces),	1.016
Milk (pints),	1.114
Butter and butterine (ounces),	1.406
Cheese (ounces), . . . . .	.107
Sugar (ounces),	2.415
Tea (ounces), . . . . .	.147
Coffee (ounces), . . . . .	.281

Combined Purchases.

As usual the institutions have united in buying their staples in combination, and have used a common set of specifications. The advantages which usually prevail as a result of this form of buying have been decreasingly evident in the year under discussion. This is the result of the fact that as the year progressed a shortage in supplies became so pronounced that very few dealers cared to enter into a contract entailing later responsibility for deliveries covering a year. This was also caused in part by the ever-increasing and constantly changing rates in freight.

For most of the commodities less than half the number of firms bid than in the year previous, and the prices quoted were far from being favorable. On certain commodities no bids at all were obtained.

A reasonable inference to be drawn from these facts is that in times of uncertain sources of supply, deranged transportation conditions, and nonproduction, it is seldom advantageous to combine.

It is much easier to pick up a small lot for one institution than to get a favorable contract for thirteen institutions for a long period in advance.

It is not intended, however, to imply that the value of competitive bidding is in any way lessened by these facts.

It is believed that competitive bids should always be obtained in the case of staple supplies, and that the year 1916 has been an unusual one from the buyer's standpoint.

¹ Includes beans, cereals and flour.

GENERAL MATTERS.

NEW LEGISLATION.

The following acts and resolves were passed by the Legislature of 1916:—

GENERAL ACTS, CHAPTER 2.

AN ACT RESTRICTING INCREASES IN SALARY OF CERTAIN STATE EMPLOYEES.

Be it enacted, etc., as follows:

SECTION 1. Without the consent and approval of the governor and council it shall be unlawful for any head of a department or other officer of the commonwealth to increase the salary of any employee under his direction who is receiving an annual salary of one thousand dollars or more, notwithstanding any act heretofore passed authorizing such an increase.

SECTION 2. This act shall take effect upon its passage. [Approved February 7, 1916.]

GENERAL ACTS, CHAPTER 283.

AN ACT RELATIVE TO THE GRAFTON STATE HOSPITAL.

Be it enacted, etc., as follows:

SECTION 1. Section two of chapter six hundred and seventy-nine of the acts of the year nineteen hundred and twelve, as amended by chapter four hundred and fifty-six of the acts of the year nineteen hundred and fourteen, and by chapter one hundred and seventy of the General Acts of the year nineteen hundred and fifteen, and sections three and four of the said chapter six hundred and seventy-nine are hereby repealed.

SECTION 2. This act shall take effect upon its passage. [Approved June 1, 1916.]

GENERAL ACTS, CHAPTER 239.

AN ACT TO AUTHORIZE THE TEMPORARY RELEASE OF PATIENTS COMMITTED TO INSANE HOSPITALS FOR LIFE.

Be it enacted, etc., as follows:

The provisions of section seventy-five of chapter five hundred and four of the acts of the year nineteen hundred and nine shall apply to the case of a patient committed to an insane hospital for the term of his natural life under the provisions of section one hundred and four of said chapter five hundred and four, after an acquittal by reason of insanity upon an indictment for murder or manslaughter, but the superintendent shall not permit any such person temporarily to leave the hospital without the approval of the governor and council. Neither such permission temporarily to leave the hospital, nor failure to return thereto, shall terminate or in any way affect the original order of commitment. [Approved May 20, 1916.]

GENERAL ACTS, CHAPTER 122.

AN ACT RELATIVE TO COMMITMENT AND DISCHARGE OF FEEBLE-MINDED PERSONS.

Be it enacted, etc., as follows:

SECTION 1. Chapter five hundred and four of the acts of the year nineteen hundred and nine is hereby amended by striking out section sixty-three and inserting in place thereof the following: — *Section 63.* If upon application in writing, a judge of probate finds that a person is a proper subject for the Massachusetts School for the Feeble-Minded or the Wrentham state school, he may commit him thereto by an order of commitment directed to the trustees thereof, accompanied by the certificate of a physician, qualified as provided in section thirty-two, that such person is a proper subject for said institution. The physician who makes the said certificate shall have examined the alleged feeble-minded person within five days of his signing and making oath to the certificate. A certificate bearing date more than ten days prior to the order of commitment of any person alleged to be feeble-minded shall be void, and the order of commitment herein provided for shall be void if such person shall not be received at the school to which he was committed by such order of commitment within thirty days after the date thereof. Unless the person sought to be committed is present at the time of the hearing, or the application is made by some one legally entitled to the custody of such person, notice of the application and of the time and place of hearing thereon shall be given to the person sought to be committed, and the order of commitment shall state what notice was given or the finding of facts which made notice unnecessary, and shall authorize custody of the person until he shall be discharged by order of a court or otherwise in accordance with law.

SECTION 2. Section sixty-four of chapter five hundred and four of the acts of the year nineteen hundred and nine is hereby amended by inserting after the word "school", in the tenth line, the following: — A physician who makes the said certificate shall have examined the alleged feeble-minded person within five days of his signing and making oath to the certificate, and such medical certificate shall be void if the person certified to be feeble-minded shall not be received at the school to which he is committed within thirty days after the date thereof, — so as to read as follows: — *Section 64.* The trustees of said institutions may at their discretion receive, maintain and educate in the school department, any feeble-minded person from this commonwealth, gratuitously or otherwise, upon application being made therefor by the parent or guardian of such person, which application shall be accompanied by the certificate of a physician, qualified as provided in section thirty-two, that such person is deficient in mental ability, and that in the opinion of the physician he is a fit subject for said school. A physician who makes the said certificate shall have examined the alleged feeble-minded person within five days of his signing and making oath to the certificate, and such medical certificate shall be

void if the person certified to be feeble-minded shall not be received at the school to which he is committed within thirty days after the date thereof. Special pupils may be received from any other state or province at a charge of not less than three hundred dollars a year. The trustees may also at their discretion receive, maintain and educate in the school department other feeble-minded persons, gratuitously or upon such terms as they may determine.

SECTION 3. Section seventy-eight of said chapter five hundred and four is hereby amended by adding at the end thereof the following: — Such an application may likewise be made by any inmate of the Massachusetts School for the Feeble-Minded or of the Wrentham state school, or by any person in behalf of such inmate, — so as to read as follows: — *Section 78.* Any person may make written application to a justice of the supreme judicial court at any time and in any county, stating that he believes or has reason to believe that a person named in such application is confined as an insane person in a hospital for the insane or other place, public or private, and ought not longer to be so confined, and giving the names of all persons supposed to be interested in keeping him in confinement, and requesting his discharge. Such an application may likewise be made by any inmate of the Massachusetts School for the Feeble-Minded or of the Wrentham state school, or by any person in behalf of such inmate.

SECTION 4. Section seventy-nine of said chapter five hundred and four is hereby amended by striking out the word “person”, in the seventh and eighth lines, and inserting in place thereof the words: — or feeble-minded person, as the case may be, — so as to read as follows: — *Section 79.* The justice, upon reasonable cause shown for a hearing, shall order notice of the time and place thereof to be given to the superintendent or manager of the hospital or place of confinement, and to such other persons as he considers proper; and such hearing shall be given as soon as conveniently may be before any justice of said court in any county. The alleged insane or feeble-minded person, as the case may be, may be brought before the justice at the hearing upon a writ of habeas corpus, if any person so requests and the justice considers it proper. Pending the decision of the court such person shall remain in the custody of the superintendent or manager. An issue or issues may be framed and submitted to a jury by direction of the justice or on the request of any person who appears in the case. The jurors may be those in attendance on said court, if in session at the time of the hearing, or may be summoned for the purpose upon the order of the justice substantially in accordance with the provisions of chapter one hundred and seventy-six of the Revised Laws.

SECTION 5. Section eighty of said chapter five hundred and four is hereby amended by inserting after the word “confined”, in the fifth line, the words: — or in case of an inmate of the Massachusetts School for the Feeble-Minded, or of the Wrentham state school, that such inmate is not feeble-minded, or that continued custody of his person is unnecessary and

unreasonable, or that he can be discharged with safety to himself and the state, and will be cared for properly elsewhere, — so as to read as follows: — *Section 80.* If it appears upon the verdict of the jury, or in the opinion of the justice, if the case is not submitted to a jury, that the person so confined is not insane, or that he is not dangerous to himself or others and ought not longer to be so confined, or in case of an inmate of the Massachusetts School for the Feeble-Minded, or of the Wrentham state school, that such inmate is not feeble-minded, or that continued custody of his person is unnecessary and unreasonable, or that he can be discharged with safety to himself and the state, and will be cared for properly elsewhere, he shall be discharged from confinement.

SECTION 6. This act shall take effect upon its passage. [*Approved April 13, 1916.*]

GENERAL ACTS, CHAPTER 67.

AN ACT RELATIVE TO THE QUALIFICATIONS OF PHYSICIANS CERTIFYING TO
INSANITY.

Be it enacted, etc., as follows:

Section thirty-two of chapter five hundred and four of the acts of the year nineteen hundred and nine is hereby amended by adding at the end thereof the words: — except that one physician on the medical staff of the psychopathic department of the Boston state hospital who is duly qualified as hereinbefore provided, and who shall be designated by the state board of insanity, may sign certificates for the commitment of insane persons who have been admitted to that department for temporary care pending the determination of their insanity or as voluntary inmates, and who are to be committed to the Boston state hospital, but such physician, if a salaried officer of the said hospital, shall not be entitled to any fees, — so as to read as follows: — *Section 32.* A physician shall not make a certificate of insanity unless he makes oath that he is a graduate of a legally chartered medical school or college, that he has been in the actual practice of medicine for three years since his graduation and for three years last preceding the making of said oath, and that he is registered in accordance with the provisions of chapter seventy-six of the Revised Laws, nor unless his standing, character and professional knowledge of insanity are satisfactory to the judge. A physician who makes such certificate shall have examined the alleged insane person within five days of his signing and making oath to the certificate, and shall state therein that in his opinion such person is insane and a proper subject for treatment in a hospital for the insane, and the facts on which his opinion is based. A copy of the certificate, attested by the judge, shall be delivered with the insane person to the superintendent of the hospital or receptacle to which the person shall have been committed, to be kept on file with the order of commitment, and he shall forthwith transmit to the state board of insanity copies of such certificate, of the statement required by the provisions of

section thirty-three and of the order of commitment. A certificate bearing date more than ten days prior to the commitment of any person alleged to be insane shall be void, and no certificate shall be valid or received in evidence if signed by a physician holding any office or appointment, other than that of consulting or advisory physician, in a hospital or receptacle for the insane to which such person is committed, except that one physician on the medical staff of the psychopathic department of the Boston state hospital who is duly qualified as hereinbefore provided, and who shall be designated by the state board of insanity, may sign certificates for the commitment of insane persons who have been admitted to that department for temporary care pending the determination of their insanity or as voluntary inmates, and who are to be committed to the Boston state hospital, but such physician, if a salaried officer of the said hospital, shall not be entitled to any fees. [*Approved March 22, 1916.*]

GENERAL ACTS, CHAPTER 301.

AN ACT RELATIVE TO THE RESIGNATION OF TRUSTEES.

Be it enacted, etc., as follows:

SECTION 1. Chapter one hundred and forty-seven of the Revised Laws is hereby amended by striking out section twelve and inserting in place thereof the following: — *Section 12.* A trustee may upon his own request resign his trust and the guardian, guardians or committee of an insane trustee, appointed by a court having jurisdiction in the premises, may on behalf of the insane person resign his trust, if the court authorized to appoint a trustee finds it proper to allow such resignation, and in the case of an insane trustee the court may accept such resignation without notice to him.

SECTION 2. This act shall take effect upon its passage. [*Approved June 2, 1916.*]

For copy of act abolishing the State Board of Insanity and establishing the Massachusetts Commission on Mental Diseases, see page 9.

SPECIAL APPROPRIATIONS.

The special appropriations for the year 1916 and for eight, ten and eighteen year periods are shown in the following tables: —

Detailed Statement.

	1916.	Eight Years, ending 1916.	Ten Years, ending 1908.	Eighteen Years, ending 1916.
Worcester Hospital:— Constructing and furnishing building for 50 patients at Hillside Farm, . . . [Resolves, chapter 126.]	\$20,000 00	\$164,775 00	\$299,098 44	\$463,873 44
Taunton Hospital,	—	\$146,300 00	\$325,205 00	\$471,505 00
Northampton Hospital:— Alteration of laundry for use as dining room for employees,	\$2,300 00			
Installation of vacuum system, . . . [Resolves, chapter 124.]	1,200 00			
Totals,	\$3,500 00	\$81,425 00	\$217,300 00	\$298,725 00
Danvers Hospital:— Constructing and furnishing nurses' home to accommodate 60 men and mar- ried couples,	\$50,000 00			
Purchase of 8 acres of land,	800 00			
Constructing storehouse and service building,	47,000 00			
[Resolves, chapter 120.]				
Totals,	\$97,800 00	\$115,650 00	\$364,100 00	\$479,750 00
Westborough Hospital:— Remodeling, renovating and refurnish- ing female wards Nos. 1, 2, 4 and 5, . . [Resolves, chapter 125.]	\$15,000 00	\$252,750 00	\$454,625 00	\$707,375 00
Boston Hospital:— Constructing and furnishing women's custodial building to accommodate 150 patients and 4 nurses,	\$140,000 00			
Extension of sewer and water service, . .	5,000 00			
Fire alarm and protection,	2,500 00			
Constructing fire escapes,	1,683 00			
Constructing piggery,	1,800 00			
[Resolves, chapter 132.]				
Totals,	\$150,983 00	\$1,593,481 57	—	\$1,593,481 57
For land taken by eminent domain for Bos- ton Hospital (expended under direction of Board of Insanity),	—	\$400,000 00	—	\$400,000 00
Grafton Hospital:— Furnishing and equipping the adminis- tration building,	\$3,000 00 ¹			
Completing and furnishing kitchen and service building at the Oaks,	5,000 00 ¹			
Furnishing infirmary and building for 100 patients at Elms,	1,000 00 ¹			
[Resolves, chapter 144.]				
Installation of heat from central power plant for the Elms group,	23,000 00			
[Resolves, chapter 123.]				
Totals,	\$32,000 00	\$938,100 00	\$517,900 00	\$1,456,000 00
Medfield Hospital,	—	\$97,727 00	\$558,700 00	\$656,427 00
Gardner Colony:— Constructing and furnishing a building for 10 disturbed patients and 2 nurses, . .	\$7,500 00			
Extension of water supply,	2,000 00			
Purchase of transmission lines of the Gardner Electric Light Company, . . . [Resolves, chapter 122.]	2,500 00			
Totals,	\$12,000 00	\$117,050 00	\$495,950 00	\$613,000 00
Monson Hospital,	—	\$304,140 00	\$431,800 00	\$735,940 00

¹ Authorized from balances of appropriations under chapter 124, Resolves of 1915.

Detailed Statement — Concluded.

	1916.	Eight Years, ending 1916.	Ten Years, ending 1908.	Eighteen Years, ending 1916.
Foxborough Hospital:—				
Constructing and furnishing a building to accommodate 75 acutely insane pa- tients,	\$70,000 00			
Constructing corridors to connect with corridors under construction,	12,000 00			
Renovating wards A, B, C, D, F and G, .	13,200 00			
Constructing and furnishing cottage to accommodate 22 nurses,	13,000 00			
Constructing coal trestle,	4,000 00			
[Resolves, chapter 121.]				
Totals,	\$112,200 00	\$166,200 00	\$173,150 00	\$339,350 00
Massachusetts School for the Feeble- minded:—				
Constructing and furnishing recreation building,	\$23,700 00	\$92,200 00	\$537,100 00	\$629,300 00
[Resolves, chapter 127.]				
Wrentham School:—				
Constructing and furnishing dormitory to accommodate 105 patients,	\$56,000 00			
Constructing vegetable cellar,	4,800 00			
Addition to laundry building and for new machinery,	5,160 00			
[Resolves, chapter 140.]				
Totals,	\$65,960 00	\$796,860 00	\$247,800 00	\$1,044,660 00
New School for the Feeble-minded in Belchertown:—				
Constructing and furnishing a dormitory for 105 girls,	\$50,000 00			
Constructing and furnishing a farm group for 50 boys,	25,000 00			
Constructing and furnishing a laundry and service building,	20,000 00			
Constructing and furnishing a kitchen and storehouse,	20,000 00			
Constructing a water system,	15,000 00			
Constructing a sewerage system,	5,000 00			
For grading a railroad track and for mis- cellaneous improvements,	5,000 00			
Repairing and furnishing old houses and for repair of barns,	10,000 00			
[Resolves, chapter 160.]				
Totals,	\$150,000 00	\$200,000 00	—	\$200,000 00
Hospital for insane in the metropolitan dis- trict,	—	\$115,000 00	—	\$115,000 00
State Infirmary,	—	—	\$120,000 00	\$120,000 00
Bridgewater Hospital,	—	\$90,000 00	\$235,000 00	\$325,000 00
Purchase of Boston Insane Hospital, . .	—	\$1,000,000 00	—	\$1,000,000 00

Summary of Special Appropriations.

Insane:—				
Constructing, furnishing and equipping buildings for patients and nurses, . .	\$300,500 00	\$2,267,967 31	\$2,207,525 00	\$4,475,492 31
Number of patients provided for, . .	285	2,659	2,992	5,641
Average per capita cost,	\$833 33	\$726 15	\$596 27	\$658 55
Number of nurses provided for, . . .	82	447	651	1,098
Average per capita cost,	\$768 29	\$754 16	\$650 49	\$692 70
Patients and nurses provided for, . .	357	3,106	3,643	6,739
Average per capita cost,	\$818 80	\$730 18	\$605 96	\$664 11

Summary of Special Appropriations — Concluded.

	1916.	Eight Years, ending 1916.	Ten Years, ending 1908.	Eighteen Years, ending 1916.
Insane — <i>Con.</i>				
Land, buildings for officers and employ- ees and for administrative purposes, including furnishing and equipment, improvements and repairs,	\$151,983 00	\$2,170,061 26	\$1,733,886 44	\$3,903,947 70
Totals,	\$452,483 00	\$4,438,028 57	\$3,941,411 44	\$8,379,440 01
Feeble-minded: —				
Constructing, furnishing and equipping buildings for patients and nurses, . .	\$131,000 00	\$730,000 00	\$425,500 00	\$1,155,500 00
Number of patients provided for, . .	260	1,328	840	2,173
Average per capita cost,	\$503 84	\$485 31	\$435 12	\$464 79
Number of nurses provided for, . .	—	131	82	213
Average per capita cost,	—	\$652 67	\$731 70	\$683 09
Patients and nurses provided for, . .	260	1,459	922	2,386
Average per capita cost,	\$503 84	\$500 34	\$461 50	\$484 28
Land, buildings for officers and employ- ees and for administrative purposes, including furnishing and equipment, improvements and repairs,	\$108,660 00	\$359,060 00	\$359,400 00	\$718,460 00
Totals,	\$239,660 00	\$1,089,060 00	\$784,900 00	\$1,873,960 00
Epileptic (sane): —				
Constructing, furnishing and equipping buildings for patients and nurses, . .	—	\$87,000 00	\$152,550 00	\$239,550 00
Number of patients provided for, . .	—	150	192	342
Average per capita cost,	—	\$560 00	\$732 03	\$656 57
Number of nurses provided for, . .	—	4	27	31
Average per capita cost,	—	\$750 00	\$444 44	\$483 87
Patients and nurses provided for, . .	—	154	219	373
Average per capita cost,	—	\$564 93	\$696 57	\$642 22
Land, buildings for officers and employ- ees and for administrative purposes, including furnishing and equipment, improvements and repairs,	—	\$61,570 00	\$63,350 00	\$124,920 00
Totals,	—	\$148,570 00	\$215,900 00	\$364,470 00
Inebriate: —				
Land, buildings for officers and employ- ees and for administrative purposes, including furnishing and equipment, improvements and repairs,	—	\$5,000 00	\$35,517 00	\$40,517 00
All classes: —				
Constructing, furnishing and equipping buildings for patients and nurses, . .	\$431,500 00	\$3,084,967 31	\$2,785,575 00	\$5,870,542 31
Number of patients provided for, . .	545	4,137	4,024	8,156
Average per capita cost,	\$676 14	\$642 82	\$596 11	\$606 84
Number of nurses provided for, . .	82	582	760	1,342
Average per capita cost,	\$768 29	\$731 29	\$651 94	\$686 35
Patients and nurses provided for, . .	627	4,719	4,784	9,498
Average per capita cost,	\$826 62	\$653 73	\$583 27	\$618 08
Land, buildings for officers and employ- ees and for administrative purposes, including furnishing and equipment, improvements and repairs,	\$260,643 00	\$2,595,691 26	\$2,192,153 44	\$4,787,844 70
Totals,	\$692,143 00	\$5,680,658 57	\$4,977,728 44	\$10,658,387 01
Average amount appropriated annually, .	—	\$710,082 32	\$497,772 84	\$592,132 61
Purchase of the Boston Insane Hospital, .	—	\$1,000,000 00	—	\$1,000,000 00
Totals,	\$692,143 00	\$6,680,658 57	\$4,977,728 44	\$11,658,387 01

SEMIANNUAL CONFERENCES.

The thirty-fifth semiannual conference of the State Board of Insanity and the trustees of the different institutions was held at the State House on May 23, 1916. Dr. Michael J. O'Meara, chairman of the Board, presided. The subjects for discussion were: —

1. Tuberculosis in State Institutions.

(a) What is being done in the way of segregating the mild and violent cases of insanity?

(b) The needs of the institutions to accomplish complete segregation and intensive treatment.

2. Relative to Receipts from the Sale of Farm Products.

The views of the different speakers as expressed at this conference were as follows: —

Michael J. O'Meara, M.D., chairman, State Board of Insanity: — The law requires that after an official visit on the part of a board of trustees, a written account of the condition of the institution under its supervision shall forthwith be transmitted to the State Board of Insanity. Within the past year a trustee of one of the State hospitals made the following report to the State Board: —

On a small ward occupied mostly by old men, I found a patient well advanced in pulmonary tuberculosis, who could not live longer than one or two months. However, on account of his type of insanity he is being kept on this ward, exposing all the other patients to the disease.

This institution has a building for patients suffering from tuberculosis; but this building is adapted only for patients who are quiet and can be trusted.

The State Board referred this letter to the superintendent, and he alleged that nothing could be done. In a letter to the State Board, he said: —

Our wards for tubercular patients are open wards and are not equipped for the care of disturbed or more advanced cases of tuberculosis. These cases, so far as possible, are segregated; and where it is necessary to place them on wards, they are placed among the organic, demented type. It is a fact that at this hospital we are not equipped for the proper segregation of this type of tubercular patient.

The State Board and the trustees also are well aware that this is not the proper way to take care of either those suffering from tuberculosis or those suffering from any of the forms of mental disease, even from the organic and chronic demented forms. Had this institution been granted the buildings which its trustees demanded, it would have been equipped to take care of this menacing type of patient.

It is our duty, under such circumstances as these, to keep before the Legislature the ever-increasing necessity of making provision for cases of this kind in separate buildings adapted for the purpose. However, it does seem as if something might be done with the means at hand; and we have invited you here to-day — those of you who have made tuberculosis your life study — to discuss with us ways and means to this end, and to tell us how to obviate and correct conditions such as I have described to you.

Dr. L. Vernon Briggs, Secretary, State Board of Insanity, has two letters which he would like to read.

From Dr. George L. Wallace, superintendent of the Wrentham State School:—

Replying to your letter of the 12th inst., in which you invite me to write a short article for the semi-annual conference of the Board on the 23d inst. on the subject of tuberculosis in State institutions, will say that up to the present time we have had so little in our institution I do not feel qualified to take this subject up. I will attend the conference, however, and will be interested in the discussion, which will enable us to make better provision for tubercular cases in the future.

I have thought that for the immediate future our needs could be met by utilizing one ward in our new hospital building for this purpose. Up to the present time we have been remarkably free from active tuberculosis among our patients. I presume this is due, no doubt, to the fact that the majority of them are young. I wish to thank you for your invitation to prepare this paper, and assure you I appreciate your thought in the matter.

From Dr. Vincent Y. Bowditch, 506 Beacon Street, Boston, Mass.:—

I have your letter of May 12 telling of the next semiannual conference of the State Board next Tuesday, May 23, on the subject of tuberculosis in the State institutions. I am extremely sorry, but I shall be away from Boston at the time so cannot attend the meeting. Perhaps if I make a few remarks in a letter, however, it may answer the purpose.

At the recent meeting in Washington of the National Association for the Study and Control of Tuberculosis a resolution was made urging the large hospitals to have some special ward erected for the reception of patients suffering from pulmonary tuberculosis, both for purposes of humanity and for instruction where medical schools were connected with these hospitals. With our present knowledge such methods are considered entirely safe as far as any possible infection is concerned, a consumptive who is being cared for by a trained nurse, and where discipline is observed as to the care of the sputum, not being a source of danger to others. I believe that in every State hospital for the insane there should be a separate ward for such cases, as of course they are a source of danger, situated as they often are among the non-tuberculous.

In saying this, I recognize the special difficulties in dealing with patients who are not in their normal state of mind, it being possible that such patients would not in every case be amenable to rules such as are necessary. At the same time, it would improve present conditions greatly, and the amount of risk involved would be comparatively slight. In the case of some of the patients being what we call ambulant (that is, not confined to their beds), it would be better to have the ward to a certain extent isolated from the others so that grounds could be had outside the building upon which such patients could be placed without mingling with others in the institution; but as far as cases which are confined to their beds are concerned, a pavilion ward not far from the others would be perfectly reasonable and justifiable.

I sincerely trust that this matter will not only be taken seriously by the Board, but that steps will be taken to provide such places for the tuberculous, this being one of the important steps in the eradication or control of the disease which causes a greater death rate than any other in our communities.

I hope that these suggestions may be of use, and regret that I cannot be present at the meeting.

Dr. Newell B. Burns, assistant superintendent, North Reading State Sanatorium:— I have an abstract of a paper, "Possibilities in the Treatment of the Tuberculous Insane." This paper was presented at the conference held last November at Danvers State Hospital on the occasion of the twentieth anniversary of the founding of the laboratory. I am again pleased to have the opportunity of making a few remarks upon this topic.

It was estimated that one-fourth of the tuberculosis which appeared in the patients in a group of hospitals for the insane during a certain period was present at the time of admission; and that three-fourths of the total number of patients con-

tracting the disease did so within the institutions. Therefore it is important, (1) to detect tuberculosis upon admission; (2) to detect early tuberculosis among the hospital population; and (3) to segregate open cases.

The patient's family history is looked into carefully. It should be remembered that there is apparently some correlation between dementia præcox and the tuberculous diathesis, and that housing conditions and heredity in tuberculosis go hand in hand, the disease perpetuating itself in so-called "family clusters." Hence we must have plenty of information from relatives and friends supplementing the history of family tendencies and of the patient's past and present illnesses.

Hospital physicians admitting patients are apt to follow their respective inquiries too closely, neglecting the wider range of possibilities in the patient's previous illnesses. I mean to say that we all, I believe, have a tendency to look a little too closely into the one disease for which our hospital stands, at the expense of losing information about the side lines.

A patient mentally ill may be admitted to a sanatorium with so much diagnostic importance laid upon his tuberculous trouble that his mental trouble may be overlooked until difficulties arise later. As errors of omission are always bound to occur I presume that the reverse situation probably occurs. Therefore we must know in detail about the previous general state of health as well as the mental health if we are to guard carefully against the admission unawares of tuberculous patients to the hospitals for the insane.

The patient's history is especially important, for very little, if any, co-operation is obtained in the physical examination of insane patients. Lung examinations are elusive because respiration is so shallow and the examiner's instructions as to breathing, coughing and voice production are not carried out. The more intelligent and understanding the patient, the better and more accurate the results in detecting early tuberculosis.

Tuberculin by the subcutaneous method is indicated for diagnosis when suspicion calls for confirmatory action. There is a large field for the use of the X-ray which may be quite helpful in bringing about a positive diagnosis. All cases of diarrhoea which persist over the winter are to be regarded as

suspicious, and should receive diagnostic injections of tuberculin. Laboratory examinations of dejecta may disclose the presence of tubercle bacilli from swallowed sputum, as well as from the ulcerations of intestinal tuberculosis.

Loss of weight, persistent and sometimes rapid, is an important symptom to be looked into among large groups of insane patients. Hoarseness and loss of voice, unless accounted for by excessive use of the vocal cords, may be an early symptom of pulmonary tuberculosis. There may be no noticeable cough to attract attention. Such cases of tuberculosis occur among the insane, the first intimation of far-advanced disease being marked weakness perhaps soon followed by death.

In a certain large, well-managed institution 60 per cent. of the deaths for twenty-one years came to autopsy, 2,102 in number. In 20 per cent. was found active tuberculosis, while latent tuberculous lesions were found in a yet larger number. In certain State hospitals in Massachusetts there were discovered 149 cases of tuberculosis previously unknown in a total of 3,831 autopsies.

Dr. Southard's data presented this morning show in a striking manner that many cases of tuberculosis among the insane may escape notice clinically to be finally revealed at autopsy.

There seems to be a high correlation between dementia præcox and tuberculosis. In 1905, 42 per cent. of the deaths from tuberculosis in all the Massachusetts State insane hospitals were præcox cases. There is an age onset coincidence of the two diseases. Furthermore, such demented and untidy patients with nutritive disorders probably are more susceptible to infection. These patients are always picking up things from the floor and putting them into their mouths, thereby inviting infection. Their superficial respiration and lowered metabolism render them easy prey to tuberculosis.

More trustworthy patients are able to obtain daily out-of-door exercise, which appears to be the best prevention against consumption among the insane. If there were opportunities for open-air exercise for female patients to the same extent as for males, the female mortality would be less.

Europeans went into the matter of segregation at an early date, and quite thoroughly. The section of psychiatry at the

Thirteenth International Congress in Medicine, Paris, 1900, voted a measure favoring the isolation of tuberculous insane and treatment in special pavilions. It was brought out by Marie that German institutions had already established this practice, and that for the purpose a so-called asylum-sanatorium was set up at Lauenburg.

Dr. F. Liemens at the Congress in Berlin, 1899, described fully (see *Psych. Wocheschr.*, 1899, Halle No. 1799, p. 160) the Lauenburg institution planned by him in 1886, and constructed by the German authorities in 1896. Briefly, it may be said that the buildings were located in pine woods at a considerable altitude, and remote from the dusty winds of cities. Pavilions or barracks were of one floor built on a basement and with sunny exposure.

In the hospital building were rooms intended each for a disturbed patient. However untidy the patient might be with infectious matter, including sputum, the room could be easily and quickly cleaned. Terrazzo floors, enameled walls, sanitary bases and a minimum of woodwork heavily varnished made the whole room easily washable. These rooms were lighted through heavy windows placed high up and completely around the top of the room. Thus much sunlight was admitted. This German institution would serve almost as a present-day model for similar construction in this work.

In America, Hutchings, Carrington and others have discussed the need for isolation of the tuberculous insane. Dr. A. D. MacDonald, speaking of his own experience, stated: "The isolation of tuberculosis patients among the insane has reduced to a minimum the danger of infection to other patients and employees. The patients themselves have suffered no injury or hardship, but have, on the contrary, been unmistakably benefited."

No class of infectious patients is so dangerous to work with from the standpoint of contracting tuberculosis as the insane, and the protection of employees in State institutions against tuberculous infection is well worth earnest consideration.

A segregation unit is possible in Massachusetts with some definite system of transfer in operation so that isolation could be as nearly complete as possible. One special institution

might be provided for the care of the tuberculous insane. This separate unit could be planned to accommodate, in different sections, various sorts of patients. For instance, old demented patients should not be put out on open pavilions, but should be made comfortable in a hospital ward until the end. The early præcox case which has not yet reached the stage of dementia should not be housed with excited patients. They should be in separate sections as well as the manic-depressive and high-grade imbecile type.

Special small wards with smooth walls and floors of asphalt mastic would be appropriate for excited infectious patients. These rooms could be easily washed down (Lauenburg). They should admit a maximum of sunlight through windows of wired glass high up on the walls. In this same unit could be open pavilion construction for the outdoor treatment of trustworthy cases.

The various sections could all be under the same roof with connecting corridors, allowing the same division as in a large hospital for the insane, where there are wards for the disturbed, untidy cases and wards for the fairly well-behaved patients. This separate unit is preferred to the cottage type because all patients are where they can be watched; especially the paranoid type of case, which would provide perpetual surprises if cared for in an ordinary sanatorium type.

Separate dishes, separate dish-washing arrangements and separate yards for recreation for the tuberculous patients are thereby assured. This arrangement would undoubtedly cut down the tuberculosis morbidity rate in our insane hospitals, and it would also make the employees' work of a much safer character.

Lately there have been developed special units for the tuberculous insane in Florida and other States. Some New York institutions have for a number of years maintained pavilions for a similar purpose.

In planning any sort of construction the necessity for abundance of fresh air, sunlight and absolute cleanliness must be remembered, not only to protect the attendants but to aid in the recovery of the sick. In the long run tents are too expensive and unsatisfactory, and should not be considered for

more than temporary housing. At the North Reading State Sanatorium tents have been gradually displaced by wooden construction.

The report of the Bureau of Census, published in 1914, dealing with the insane and feeble-minded in institutions, records almost the same number of deaths from tuberculosis for the insane as for the total adult population, — 12.4 per cent. in one case and 12.5 per cent. in the other. This leads up to the matter of having a record of tuberculosis morbidity in the insane hospitals so that one would know how much tuberculosis was developing in each hospital. The problem then could be worked out as to how many of those discharged contracted tuberculosis in the hospital.

Is it fair to expect much if the local management of a hospital for the insane is to be handicapped by the added responsibility of treating a chronic and oft-recurring disease like tuberculosis? The segregation of the tuberculous insane in separate units is one idea for consideration for the solution of this practical problem.

Dr. L. Vernon Briggs, secretary of the State Board of Insanity: — The Board is about to make a survey of tuberculosis in the State hospitals under its direction. Before beginning such survey we thought it would be well to have this one of the subjects of the conference, to better enable us to systematize our work, to obtain accurate results, and to make satisfactory recommendations.

We hope that this discussion will bring out the best method of ascertaining how many tubercular cases we have in the State hospitals, and opinions on the value of the different methods of examination, *i.e.*, the tuberculin test, examination of sputa, feces, etc.; also the value of segregation, — whether cases may be properly segregated in rooms or in wards, or if it is necessary for each hospital to have shacks or tubercular buildings; also that we may learn from those who have made a study of this question how often examinations should be made, and if the prevalence of tuberculosis in dementia præcox — and possibly manic-depressive cases — is so much more frequent that examinations in these classes of patients should be made oftener than in any other classification.

For the year ending May 1, 1915, we find in our hospitals the following situation: —

Special buildings: —

Danvers Hospital.

Westborough Hospital.

Medfield Hospital.

Other accommodations: —

Worcester Hospital, special wards.

Psychopathic Hospital, single rooms.

Wrentham State School, separate rooms.

Bridgewater Hospital, open-air roof.

State Infirmary, camps for women.

No special accommodations: —

Northampton Hospital, segregated as well as possible.

Grafton Hospital, incipient with other cases; 15 have open-air rooms.

Gardner Colony, no special accommodations.

Monson Hospital, segregated as well as possible; inadequate accommodations; 6 patients cared for in hospital piazza.

Foxborough Hospital, no special accommodations; 6 females in one small dormitory; 2 men in double room.

Taunton Hospital, no special accommodations.

Boston Hospital, no special accommodations.

In public institutions and McLean Hospital for the year ending Sept. 30, 1915, there were 134 deaths from tuberculosis, or 10.71 per cent. of all deaths; and in New York, of the deaths diagnosed as pulmonary tuberculosis, 55 per cent. were dementia præcox cases.

I think that Dr. Southard, our State Pathologist, will touch upon the results of the autopsies on unsuspected cases, and some of the other papers will be enlightening in other ways, which I should only be repeating.

Dr. E. E. Southard, pathologist to the State Board of Insanity: — I wish to speak of the problem defined by the State Board of Insanity concerning the segregation and intensive treatment of the tuberculous insane, — an important and greatly neglected topic. The Thirteenth International Medical Congress at Paris in 1900 voted, at the instance of Marie of Villejuif, that in the opinion of the congress the tuberculous insane should be treated either in special buildings pertaining to a single hospital or in special sanatoria draining several hospitals. Marie in his argument before the passing of this

resolution called attention to the central importance of tuberculosis in nurses and attendants. Tuberculous nurses and attendants must naturally be eliminated. Only non-tuberculous recruits should enter the service. Both nurses and patients have been shown to contract the disease in institutions. Marie found that three times as many persons relatively died of tuberculosis in institutions as in the community. Brouardel brought up a number of problems that were not then and have not since been solved, *e.g.*, cleanliness, sweeping, brooms, dry and wet, nutrition, predisposition of insane to tuberculosis, special tendencies of alcoholics to contract tuberculosis, tuberculosis in private institutions for the insane, etc. Germany established in 1899 a sanatorium type of institution at Lauenburg. Great Britain and Italy also dealt with the problem as early as 1899. Several States in this country have announced the building or planning of special buildings for tuberculous insane (Wisconsin, Kentucky, Iowa).

What should be done in Massachusetts? In the first place, the numerical size of the problem must be looked into. Last year there were in the six receiving hospitals 71 deaths of record as due to tuberculosis, *viz.*, 8 per cent. of the 901 deaths. Autopsies always demonstrate more. We have looked over the statistics of 3,831 autopsies. Four hundred and seventy-one, or 12 per cent., of these patients had active tuberculosis, meaning by active a sort which could infect others (*e.g.*, open pulmonary or intestinal lesions). Of these 471, 149, or 32 per cent., had been totally unsuspected. By totally unsuspected I mean that neither was the diagnosis rendered nor did the records show any sign or symptom which could be interpreted — even the best of hindsight, *viz.*, that afforded by autopsy — as meaning tuberculosis. One in three cases of active tuberculosis should not be missed by our medical service. The pathological work of the institutions is justified, if it any longer needs justifying, by this conclusion alone.

The nature of a proper institution for the tuberculous insane may be partly inferred from a further interesting fact. If we leave dementia præcox out of account, only 5 per cent. of all deaths are of record as due to tuberculosis. There were 127 deaths in dementia præcox last year; 32 of these, or 25 per cent., are of record as dead of tuberculosis. That is, five times

as many cases of dementia præcox die of tuberculosis as other sorts of mental disease. Some writers even feel that there is an essentially tuberculous fraction of this disease. But in any case an institution suitable for tuberculous insane would be apt to be one containing numerous cases of dementia præcox.

The following table shows the autopsied results classified according to whether the tuberculosis had been known, suspected or unknown in life.

Another table shows the mental diagnosis in the autopsied cases. It is interesting that in the Psychopathic Hospital group, 7 out of 9 instances of tuberculosis should have occurred in special and unfamiliar groups of mental disorder.

Active Tuberculosis at Autopsy in Six State Hospitals.

STATE HOSPITAL.	Autopsies.	Active Tuberculosis.	Known.	Suspected or having Physical Signs.	Unknown.
Worcester,	1,156	84	19	56	9
Westborough,	540	80	11	60	9
Monson,	250	22	3	18	4
Boston,	250	53	25	9	19
Psychopathic,	35	9	3	-	6
Danvers,	1,600	223	78	43	102
Totals,	3,831	471	139	186	149

Mental Diagnosis in Tuberculosis in Autopsied Cases.

	Worcester Hospital.	Danvers Hospital.	West-borough Hospital.	Boston Hospital.	Psycho-pathic Hospital.	Monson Hospital.	Total.
Dementia præcox,	31	40	11	9	-	-	91
General paresis,	19	40	14	10	1	-	84
Senile,	4	46	13	12	1	-	76
Manic-depressive,	12	42	4	7	-	-	65
Paranoia,	2	2	7	3	-	-	14
Organic dementia,	3	8	7	2	-	-	20
Epilepsy,	2	10	2	1	-	22	37
Alcohol,	6	12	5	3	-	-	26
Miscellaneous,	5	23	17	6	7	-	58
Totals,	84	223	80	53	9	22	471

Dr. Allan J. McLaughlin, State Commissioner of Health: — I appreciate the courtesy of the State Board of Insanity in giving me this opportunity to speak this morning. They requested me to prepare a ten-minute paper, but I haven't the time to prepare papers — not even ten-minute papers — at the present stage of this eight-ring circus which we have around the State House.

But I am very glad to say a few words, first, from the point of view of the practitioner in preventive medicine. We have been accused — the ultra-scientific health officers have been accused — of being cold-blooded in our duty towards disease, because we have considered it entirely from the perspective of prevention rather than of the cure and treatment of the individual patient. To some extent that is true. I have been in cholera epidemics where we apparently neglected the individual patient in order to prevent the spread of the disease; that is, our efforts were directed in the Philippines to preventing the disease from spreading rather than to curing the individual patient. That wasn't through any lack of humane principles of the health officers, I think, but because of the scarcity of doctors; and by applying our efforts in prevention rather than in treatment we were able to save a great many more lives than if we had stopped to give transfusion on the spot. Perhaps we may be cold-blooded, but I think it is because of conditions rather than an inherent impulse of ours; and we realize that where you can combine humane principles of treatment and those of prevention you have an ideal condition, and in tuberculosis, happily, these two lines run parallel. That is, our best method of prevention, perhaps, is in the line of treatment of cases, especially the early cases.

The general principles of tuberculosis prevention are the same, whether it be in institutions for the insane, in the home, or in any other place; and I admit the seriousness of the problem in the insane hospital because of the different type of patient with which you have to deal. I plead guilty to ignorance of the problem in Massachusetts. Personally, I have not been in the institutions nor had an opportunity to study them. I hope to know more about them next year. You have here a type of patient that is not particularly amenable to treatment.

A sane patient will attempt to protect himself; he will have some idea of his obligation to protect his neighbor; he will listen to the precepts given by his medical advisor and will give some co-operation. This is a great deal to expect of those mentally defective or insane, and perhaps more than we can expect; but I hope that the State Board of Insanity will tackle this problem in spite of its difficulty, and make a great deal out of it.

Not only is it a duty to the patient, insane though he may be, to save him suffering and prevent the spread of the disease from him to others, but it is also a duty to the employees of that institution to lessen the risk that they run. It seems to me that it is too big a problem to go into detail; but whether there should be a State hospital for the tubercular insane, or whether there should be pavilions in the various hospitals for the segregation of the tuberculous, is a matter to be decided. It is not really a vital question. The vital thing is to segregate your tuberculosis patients early in some way, and find the incipient cases when there is some prospect of preventing them from becoming open cases.

I am very free to say, Mr. Chairman, that the State Department of Health will be very glad to give its full and hearty co-operation and assist in any way possible, through its commissioner, its district health officers, and its laboratories, in any campaign which you may care to inaugurate; and also that we are not doing this entirely from a brotherly feeling for another State department, — although that does actuate us to some extent, — but we feel that we are, in this way, attacking the general problem of tuberculosis, and helping ourselves to cut the death rate, which is what we are trying to do.

Dr. George A. Moore, trustee, Monson State Hospital: — In the proper consideration of any problem it is necessary to evaluate all the factors entering therein.

In responding to the request of the State Board of Insanity to discourse upon some phase of how best to handle the tuberculous in State institutions, I am making brief mention of what I conceive to be a most important factor, namely, a complete census of our tuberculous patients and a knowledge of the stage of the disease in each. To one person this may seem

such an obvious necessity that it needs no mention; another may feel that what I suggest is already an accomplished fact.

Admitting that both may be right it should do no harm to speak frankly in this connection. There can be no doubt that many cases of recognizable but unrecognized tuberculosis exist outside of institutions. It has been a question in my mind whether some workers have a confused idea of what constitutes pulmonary tuberculosis in the early stage, or fail to make sufficiently complete examination of history, symptoms and patient.

If it is true that many outside patients afflicted with tuberculosis fruitlessly seek medical advice; that the nature of their trouble remains undiscovered and they consequently are neither apprised of the presence nor treated for this disease, it may not be without profit for us to consider whether we are absolutely thorough in the institutions.

A study of the statistics would seem to indicate a great disparity in the distribution of tuberculosis in institutions; in the views as to what constitutes tuberculosis; or else in the rate of mortality in the different places. For instance, one institution reports the total number of cases for the last year as 75, with 7 deaths; another, 47, with 7 deaths; another, 47, with 16 deaths; another, 38, with 20 deaths; another, 42, with 25 deaths; another, 29, with 17 deaths.

In any of these institutions unusual conditions may have existed to cause a temporary disparity that may be absent next year, but it would appear from these figures that in the institution where 75 cases were found a moderately keen search had been made for tuberculous cases, and, with a mortality of 7, that the treatment and care had availed.

The next nearest is 47, with a mortality of 7, and that excites no particular comment, but what about totals, — 38, with 20 deaths; 42, with 25 deaths; 29, with 17 deaths. These figures give rise to the question whether all cases are found and treated, and only the advanced cases recognized, or if these hospitals have been made a base for the reception of advanced cases.

In view of the splendid effort being made by outside workers to improve the conditions among the tuberculous and to prevent the spread of tuberculosis, I would not like to think that

an outside physician could find — if he were to come in and make examinations — cases that we did not know were tuberculous.

I understand something of the difficulties which beset the staffs and management of our hospitals. I know that we cannot retain at the salaries we are able to pay in some of the hospitals the services of high-grade experienced men in every medical position; that possibly the entrance examination may in cases be conducted by young doctors whose judgment is likely to be riper and better later, but who are nevertheless liberally worth their hire; that the reason some of these men take low-salaried positions is to get some experience and accumulate a little money. But regardless of the difficulties, the right or the wrong, it seems to me that we must know every tuberculous person in our institutions that it is possible to know, whether the process is active or stationary, whether it is an open case, and knowing this, give the patient the best care possible, and other patients the best protection against infection.

At this point I suggest that elaborate precaution in the latter case may be rendered valueless if we are to take no account of the health of attendants, nurses and employees, who are quite as dangerous distributors if tuberculous.

If we know the complete list of tuberculous, we are in touch with an important point of the economics of the situation. If an institution has but a dozen or so of tuberculous cases it may be unreasonably expensive to segregate them in a special department or building, but if in a large population there are sixty or seventy, we are dealing in large enough numbers so that per capita need not be greatly disturbed.

Another economic feature lies in the fact that the tendency of the times is toward giving by law a compensation for loss sustained of health or function because of accident, or other cause, while in a given service. It seems likely that this will be extended rather than restricted; also that the pension features will be extended.

I have on another occasion commented on the economic folly of not knowing the exact physical condition of those entering service. Without examination they are presumed to be normal, and if injury or disease within the provision of the

law occurs, and indemnity is given, the adjustment will be made upon the difference between the then condition and the supposedly normal condition on entering service.

School children are being examined in many of our cities and towns, and we may hope that with extension of this until it is general, the known health condition of a person may be followed into his vocational period. Before such a hope may be realized, however, a long period of time will necessarily intervene during which we must not only protect the financial interests of the State, but the health of our charges against the danger of infection from diseased employees.

Therefore, my feeling is that we should examine thoroughly every patient and every employee, and record the condition of each for his own benefit, the benefit of other patients and employees and the institutions.

Dr. James V. May, superintendent of the Grafton State Hospital:— The importance of tuberculosis as one of the problems connected with institution management is readily shown by the number of cases reported by the State hospitals for the insane, and the percentage of deaths due to that disease. Of the 132 deaths at the Worcester State Hospital during the year ending Sept. 30, 1915, 9.09 per cent. were due to tuberculosis. The percentage of deaths from that disease at the Taunton State Hospital was 6.6 per cent.; at the Northampton State Hospital, 4.7 per cent.; at the Danvers State Hospital, 8.74 per cent.; at the Westborough State Hospital, 6.1 per cent.; at the Medfield State Hospital, 11.23 per cent.; at the Monson State Hospital, 20.68 per cent.; at the Gardner State Colony, 0; at the Boston State Hospital, 5.91 per cent.; at the Foxborough State Hospital, 5.4 per cent.; and at the Grafton State Hospital, 28.88 per cent. Of the cases dying during the year from pulmonary tuberculosis, 33 per cent. were cases of dementia præcox at the Worcester State Hospital; 90.9 per cent. at the Taunton State Hospital; 60 per cent. at the Northampton State Hospital; 33.33 per cent. at the Danvers State Hospital; 57 per cent. at the Westborough State Hospital; 81.81 per cent. at the Medfield State Hospital; 41.66 per cent. at the Boston State Hospital; 100 per cent. at the Foxborough State Hospital; and 50 per cent. at the Grafton

State Hospital. At Danvers State Hospital 46 per cent. of the tuberculous cases were diagnosed as manic-depressive insanity. During the year ending Sept. 30, 1915, there were 3,036 deaths in the 14 New York State hospitals for the insane. Of these, 350, or 11.52 per cent., were caused by tuberculosis. Three hundred and twenty-four of these cases were diagnosed as pulmonary tuberculosis, 10 as miliary tuberculosis, 2 as tubercular meningitis and 9 as tuberculosis of other organs. Of the 324 deaths from pulmonary tuberculosis, 2.7 per cent. represented senile psychoses; 2.1 per cent., general paresis; 2.7 per cent., involutional melancholia; 2.7 per cent., manic-depressive insanity; 5.86 per cent., epileptic psychoses; 5.86 per cent., alcoholic psychoses; and 55 per cent., dementia præcox. Of the 595 cases of dementia præcox occurring during the year, 180, or 30.2 per cent., died from tuberculosis. Of the 106 cases of alcoholic psychoses, death was attributed to tuberculosis in 19 cases, or 17.9 per cent. of the total. Of 695 cases diagnosed as alcoholic psychoses and suffering from other diseases, Dr. Pollock found that nearly 7 per cent. died from tuberculosis. Of a total of 1,739 cases of alcoholic psychoses, 2.7 per cent. were found to be suffering from tuberculosis. At the Government Hospital for the Insane at Washington over 20 per cent. of the cases coming to autopsy during a period of twenty-one years showed signs of active tuberculosis. Fourteen per cent. of 828 cases coming to autopsy at the St. Lawrence State Hospital showed pulmonary involvement. Of the total number of deaths during a period of eight years in the New York State hospitals, 9.5 per cent. of the deaths in the male, and 20.1 per cent. in the female, cases were due to tuberculosis. In 63 consecutive cases of dementia præcox coming to autopsy at the Binghamton State Hospital, 38 per cent. were due to tuberculosis. The report of the United States Census Bureau shows that in 1910, of 18,924 deaths in hospitals for the insane, 2,433, or 12.9 per cent., were caused by tuberculosis. Many cases are unquestionably undiagnosed during life. At the Binghamton State Hospital I found healed tubercles in 53, or 14 per cent., of 372 cases dying from diseases other than tuberculosis. This shows that a much larger percentage of recoveries can be expected than was formerly anticipated. It is worthy of

consideration that these recoveries took place in insane persons who were not known to be affected by the disease, and who received no special care or treatment other than that indicated by the psychosis from which they were suffering.

The disease in the insane, as in others, is widespread in its distribution throughout the organs of the body. Fifty-two per cent. of 75 cases coming to autopsy at the Binghamton State Hospital showed intestinal tuberculosis. In 60 autopsies I found tubercles in the spleen in 43 per cent. of the cases examined; in the liver in 45 per cent.; and in the kidneys in 18 per cent. Ten per cent. of 83 cases of general paresis showed tuberculosis at autopsy. The diagnosis is often difficult in the insane for various reasons. It is frequently impossible to obtain sputum for examination. Many of the insane who are suffering from active forms of tuberculosis rarely expectorate. In 88 specimens of sputum examined I found tubercle bacilli in 28 per cent. of the cases. Five and eight-tenths of 85 cases showed tubercle bacilli in the feces.

Owing to these difficulties, great importance must be attached to tuberculin as a diagnostic aid. In 77 cases of known tuberculosis I found, in 1910, that in the ophthalmic test old tuberculin gave positive results in 82.9 per cent. of the cases, purified tuberculin in 48.2 per cent., the Von Pirquet test in 72.7 per cent. of the cases, and the Moro test in 50 per cent. The subcutaneous tuberculin test gave positive results in all examined. In 77.6 per cent. of the cases the tuberculo-opsonic index was markedly below normal. It should be borne in mind that many normal, healthy persons will react to tuberculin administered subcutaneously in doses of 10 milligrams. I found this to be true in 20 per cent. of such cases tested. Much more accurate results will be obtained if not more than 2 milligrams of tuberculin are used. Von Ruck reported positive results with the subcutaneous test in 51.3 per cent. of 2,804 non-tubercular cases examined. These findings have been corroborated abroad by Kohler. Koch himself admitted that healthy persons could react to doses of 10 milligrams.

Many cases of tuberculosis remain dormant for years and have a prolonged hospital residence. Of the 77 cases studied at the Binghamton State Hospital, 7 had a history of less than one

year's duration, 7 between one and two years, 8 between two and three years, 6 between three and four years, 19 between four and five years, 23 between five and ten years, 4 between ten and fifteen years and 3 between fifteen and twenty years. Of these cases 13 had a hospital residence of less than five years, 19 from five to ten years, 12 from ten to fifteen years, 16 from fifteen to twenty years, 13 from twenty to thirty years, 3 from thirty to forty years and 1 a hospital residence of over forty-three years. Following the official classification of the National Association for the Study and Prevention of Tuberculosis, 52 of these cases should be classified as moderately advanced and 22 as far advanced. Two cases thought to have recovered showed healed lesions. Only one case was on examination diagnosed as being in the incipient stage.

It will, I think, be generally conceded that all cases suffering from tuberculosis in institutions should be carefully segregated and kept from contact with other patients. It has been found, furthermore, that they can be housed to advantage in buildings specially adapted to the purpose. This type of building should be designed to afford a maximum of sunlight and fresh air. For this reason glass is freely used in such construction, and there should be numerous windows which can be readily opened. Large verandas should be available, so that the patients can be kept out of doors even in rainy weather. The buildings should be so constructed that they can be thoroughly and frequently cleaned and disinfected. There should be facilities for bed treatment, and rooms provided for the preparation of special diet adapted to the needs of the individual case. An ideal building for this purpose should provide separate accommodations for disturbed cases. The clothing should be such that it can be frequently washed and sterilized. Special care should of course be given to the disposition of sputum, and all cups used for the purpose incinerated. The patients should spend practically all of their time out of doors when the weather is suitable. Careful weight records should be kept to show the results of the treatment. Separate dining rooms should be provided for employees, and they should have tableware which can be readily distinguished from that used by patients. The nurses should not under any circumstances room in wards with

the patients. A very suitable building for tuberculous cases can be built at a per capita cost of approximately \$400.

Dr. Everett Flood, superintendent of the Monson State Hospital: — The request which I have from the secretary of the State Board of Insanity is for a paper which will take ten minutes to read on the subject, "Tuberculosis in State Institutions." This manifestly applies to the institutions under the State Board of Insanity, and to institutions in Massachusetts. I have, however, a few observations on institutions in other States.

I have troubled quite a number of my friends to furnish me with information from their own hospitals, and wish to gratefully acknowledge their assistance. One of these hospitals is in Vermont, one in Rhode Island, one in Maine, two in Connecticut and one in New Hampshire. Ten of the hospitals in Massachusetts have furnished me with information in reference to the care of these cases.

In these ten hospitals 155 have died of tuberculosis in the last year. There are at present 280 in these places, — 128 men and 152 women.

The provision for the care of the tuberculous is satisfactory in seven hospitals; a makeshift arrangement exists in two; and in one no separate arrangement has so far been made to care for those afflicted with tuberculosis.

Of five hospitals in other New England States the provision for the care of the tuberculous is satisfactory in two hospitals; a makeshift arrangement exists in two; and in one no separate arrangement has so far been made.

A large number of cases classified above are not active, and many of them may safely be associated with the non-tubercular. The active cases in the insane hospitals seem to be rather few, and I think we may rationally infer that a very large number of beginning cases have been cured and remain in the hospitals practically recovered from the lung lesion.

The number of tuberculosis cases not pulmonary seems to be rather meager, as even in Baldwinville very few cases are now present. Theoretically, it would seem all active cases should be well separated from other patients. The difficulty of making this separation in an insane hospital is not so much the number

as the wide variation in mental condition which is associated with the tuberculous. Out of 30 women patients in a Connecticut institution — complete segregation being effected and a fairly good housing being accomplished by cutting off a portion of buildings not especially designed for the tuberculous — three cases were in a maniacal condition, one noisy, and several others in a talkative state, while a majority were quite able to do some work about the wards, and would have appreciated complete separation from the more turbulent cases.

In our own institution, where we have a separate cottage for each sex with tuberculosis, we find a similar difficulty, though it is less accentuated than is apparently the case among the insane. Our epileptic tuberculous are some of them of the best grade of mentality, and they live in the same building, though they do not eat at the same table, with several patients who are not only demented but who are irritable to a large degree, and have outbursts of temper, when they are noisy and apt to be violent. With a few separate rooms, and arrangements for dining in two places, two outdoor balconies, and, for the summer, several tents in the yard, it seems hardly reasonable to expect a better classification among these 25 or 30 women which we now have. Exactly the same condition prevails among our men.

In some of the insane institutions in Massachusetts there is not such an ideal division or elasticity in the arrangements for separation, so that, as prevails in the Connecticut hospital, persons of widely varying mentality have to be somewhat closely associated. The effort in all the places is to gradually make better conditions, and in some of the insane hospitals in Massachusetts this seems to have been reached with about the same degree of success as with us, where we have entirely separate cottages.

In the reports furnished me, six say that their conditions are so complete that they could not expect anything better through legislation, though they are constantly striving for minor improvements which are coming about slowly; two say that their conditions are fairly satisfactory, appropriations being needed; and two that the accommodations for tubercular cases are unsatisfactory, especially during the winter.

Dr. O'Meara — Dr. Nichols, the superintendent of the State Infirmary at Tewksbury, has had no opportunity to prepare a paper, but every one will be glad to hear from him, as he has had, I think, a larger experience in taking care of tubercular patients than any of our institution men.

Dr. John H. Nichols, superintendent of the State Infirmary: — My experience in caring for tuberculous patients has been, of course, mostly among the patients in the other department of our institution, — our general hospital. We have a very large hospital for tubercular men, with a capacity in the hospital and surrounding shacks for about 300 patients, and a hospital for tubercular women, with a capacity for 80 patients. This part of our institution has developed rather rapidly during the last eighteen or twenty years, not for the reason that we were especially trying to help solve the problem of tuberculosis, but because prior to that time all the other tuberculosis cases were kept in our general hospital wards, which were very large wards, containing from 25 to 50 patients in each; and as those patients were in all degrees of sickness, and of convalescence, etc., with the consumptives cared for in the same building, we found, of course, that tuberculosis was spreading very rapidly in our institution. So our hospitals for tubercular patients were established at a distance from our other buildings for the sake of protection of our regular cases — the regular hospital cases — that were, of course, in the majority. But after establishing these hospitals at a distance we found that the number that was sent to us increased very rapidly, and so we were always in a state of overcrowdedness — never able to get ahead of the demands.

From the fact that these hospitals of ours are filled with patients who are not insane, and because it would not be well to mix the insane and the others, our insane patients cannot be cared for in these hospitals.

About ten or twelve years ago it seemed to us that tuberculosis was increasing much more rapidly among the insane than should be the case, especially in the department for women; in our institution we have only a small proportion of men as compared with women who are insane. We had no place to care for tuberculosis excepting in buildings with very large

dormitories, and a great many in a section, but we boarded up three sides of two of our summer houses, leaving the southern exposure open; and we put all our tuberculosis cases from the women's wards into these small houses. They have been out there all winter as well as in the summer, with a result, I should say, speaking offhand, of reducing the number of tuberculosis cases somewhere from about 50 to 25, which is now the case. In fact, we are using only one of these summer houses, which has been converted into a shack. There are, of course, a certain number of cases, in the very advanced stages, that cannot be kept out there and are now in single rooms in one of our newer buildings, fairly well isolated from the other patients. But this condition as it exists is far from ideal, and we could do a great deal with this shack plan; but we should have the shacks a little farther from the other patients than is now the case. If we could have some accommodations a little farther off, out of the yard, it would be perhaps nearly all that would be necessary.

I was glad to hear the Commissioner of Health and one of the other speakers mention the importance of consideration of the employees, — the attendants and nurses. It seems to me that is a matter that should be constantly in our minds, and I have considered it a great deal, especially in the matter of our recent buildings for employees. We have made provision so that a large proportion of the rooms for employees (this is a way of prevention, perhaps, rather than cure) are arranged with three windows, — a group of three windows, — making one side of the room of glass, which windows are arranged so that they can disappear; so a large proportion of the employees will be able to sleep in rooms which are practically sleeping porches, in which one side is open to the air. Then we feel that those nurses who are getting anæmic or run down in hospital service, etc., if we put them into these rooms and require them to keep the windows open, will soon gain better health, and we are able to keep them in better condition and get more continuous service from them than we otherwise would.

Dr. George L. Wallace, superintendent, Wrentham State School: — I think there must be some error in calling on me this morning, as I did not agree to say anything at this meeting.

One thought has occurred to me, however, since coming in here and that is, as there are so many incipient cases of tuberculosis in the community that do not die of the disease it must follow that there are many cases of this disease in one form or another coming to the institutions. It is, therefore, wise to make every provision possible in the construction of the buildings and in the management of an institution to make conditions so favorable that many incipient cases in the institution will never be recognized. That is, the buildings should be constructed in such a manner as to get all the light and air possible. Also, the organization should be so managed as to have the patients out of doors in the open air as much as is practicable. In this way, while tubercular units may be necessary in all hospitals, I believe that this unit may be kept moderately small.

Dr. McLaughlin: — I am not prepared to discuss the question because I am peculiarly ignorant of it. I have not been in any of the hospitals or asylums for the insane in Massachusetts to any great extent, and I realize that the conditions there are very different from what we meet in the general field of preventive medicine.

I have heard the statement made that there is a peculiar type of tuberculosis in the hospitals for the insane, and I wonder if this is true. I have heard it several times, that there is a great preponderance of fibroid cases among the insane.

In regard to treatment, as I stated before, our prevention is treatment in this disease. Happily they lie along the same lines. I think the treatment is the same, whether the type of disease is different or not, and while we lay great stress on fresh air and good food, I think there is one cardinal principle that we are apt to neglect, and that is rest. I believe the tuberculosis process is just like the process of attempted repair of tissue in any part of the body, and the cardinal principle to effect results is rest. I think in many of our institutions we are prone, when a patient should be in bed who is able to be up, or is temporarily normal for a few days, to let that patient get up and to be very proud of his being able to do a little light work; whereas, if absolute rest had been maintained for two or three months longer, the possibility of permanent cure would have been within our reach.

Dr. John A. Houston, superintendent of the Northampton State Hospital:— I had hoped that this would be one of the meetings at which I should not be asked to speak. I have but a few words to say.

The papers that have been read this morning and the discussion of them have shown that there are many unrecognized cases of tuberculosis in our hospitals, as elsewhere. They have also shown that the class of insane most susceptible to the disease are the dementia præcox cases. They are the inactive cases and are consequently less resistive.

If they are susceptible to the disease under favorable conditions they are much more so when our wards are crowded, and this means that if our patients are living on wards intended to accommodate 25, but actually accommodating 50, then they are not properly cared for so far as their physical health is concerned, — that patients more susceptible to the disease than the average individual are living under conditions that favor the spread of the disease.

Dr. McLaughlin, in his talk, said that his efforts in the Philippines, in epidemics of another disorder, were directed rather toward prevention than cure.

It seems to me that both measures should be carried out, and that is true of the situation in Massachusetts to-day with regard to tuberculosis in our State institutions.

The question arises whether we should make more elaborate provision than we are making at the present time for the care of the recognized cases of tuberculosis, or whether we should devote more attention to prevention of tuberculosis. Without lessening our efforts in the direction of care of such cases, more in the way of prevention can be done and should be done without delay, in one way at least, namely, by providing adequate space for the patients now in the State institutions, whether tubercular or not.

As I have said, I did not intend to speak when I came here, but I am glad of this opportunity because it is the only way I have had of bringing our needs to the attention of the Legislature thus far. I see a member of the Legislature here this morning. I wrote my annual report last December, in which were set forth conditions at our institution (similar to condi-

tions in the other institutions in the State) for the guidance of the Legislature in making its appropriations. My report has just been printed this week, but the Legislature passed the appropriations weeks ago. This shows that the Legislature acted without any proper intelligence of conditions.

We have at Northampton about 30 per cent. more patients to be cared for than can be properly accommodated. Wards planned to care for 25 are accommodating twice that number. This means that there is not only a serious overcrowding, but that the space for the larger number is actually smaller than intended for the original number, because many beds are set up permanently in day spaces.

I blame the Legislature for not furnishing adequate accommodations throughout the State for the patients we are obliged to take. Institutions have no jurisdiction as to who or how many shall be received. They must take all who are committed, and in spite of efforts to discharge as many as possible the overcrowding increases every year. A new institution could be built in Massachusetts every year for quite a number of years to accommodate the increased numbers. These conditions have been called to the attention of the Legislature repeatedly, but nothing is done to better them.

This may seem to be a little off the subject, but it directly concerns the matter of prevention of tuberculosis in State institutions. If there were proper accommodations for all the patients there would be less danger of infection. It is unjust to patients in the hospitals already filled to their capacity that additional patients should be sent to deprive them of the air, sunlight and other conditions promoting health that they are entitled to, and it is unjust, also, to the new patients that they must be sent to such conditions.

This is an aspect of the subject under discussion that should appeal to the Legislature and to every citizen of our Commonwealth.

Dr. Henry P. Frost, superintendent of the Boston State Hospital:— I wish to say just a few words about separate provision for the more disturbed tubercular patients, — those whom it is difficult to care for in an open ward. Dr. Hurd, at the Buffalo State Hospital, New York, has solved this prob-

lem by constructing his tuberculosis pavilions, one for each sex, with a center extension in the rear containing single rooms. If a building so arranged is made to face southeast or southwest, rather than due south, such a north extension would secure a fair amount of sunlight. I had an opportunity to see these buildings in Buffalo recently, and learned that they have proved to be very satisfactory.

Dr. Ernest V. Scribner, superintendent of the Worcester State Hospital: — I feel there is very little I can add to the general subject. At the Worcester State Hospital, with a population of about 1,500 patients, we have at the present time 29 cases of tuberculosis, about evenly divided between the sexes. The infirmary wards on either side of the house, on the upper floors, are devoted to the care of the tuberculous insane, and I feel that if the insane are to be cared for in the same buildings with other patients we are pretty well equipped. We have a dormitory which cares for a dozen or fourteen cases, and in addition to that we have three single rooms where the more violent insane or more disturbed cases can be cared for. There is a large veranda where people can spend practically all of their time out of doors.

My own idea is that perhaps the more perfect arrangement would be a pavilion, which would be on the ground floor, where patients could get out and wander over the grounds more. That, perhaps, may come in time.

Dr. L. Vernon Briggs, secretary of the State Board of Insanity: — I would like to say a word regarding the new Metropolitan State Hospital. In studying the best type of construction for this hospital we have planned for tubercular shacks, which are very much after the plan of the Kings Park State Hospital, Kings Park, New York. The plans for the Metropolitan Hospital have been completed now nearly two months, and were accepted by the Governor and Council as satisfactory, so that, having been completed and passed upon by the Governor and Council, the only thing remaining is for the Legislature to appropriate money for the erection of the buildings. The Legislature, as you know, did not see fit to appropriate the money, so that is all held up for this year, but this summer this Board will take up the matter of tuberculosis,

and we hope to bring about some uniform care and to help the hospitals in their plans for another year, and I hope that during the next two months we may be able to accomplish something.

I would like to ask Dr. Southard to answer the question of Dr. McLaughlin, in regard to the form of tuberculosis as he finds it at autopsy.

Dr. Southard: — In answer to Dr. McLaughlin's question I would say that so far as I know there is no special tendency to fibroid phthisis in the insane, at least so far as the records of the Massachusetts institutions go. It is possible that there are more cases of bovine tuberculosis in the insane in some institutions than would be found in the population at large. In one case Dr. Theobald Smith was able to prove bovine tuberculosis from a mesenteric lymph node removed from a case in a Massachusetts hospital for the insane. Another point is that clinically unrecognized tuberculosis is met with in certain aged cases that have never shown either cough or recorded fever. It is very important to study over-winter diarrhœas in order to learn whether they are actual dysentery carriers or are cases of tuberculous enteritis.

Michael J. O'Meara, M.D., chairman, State Board of Insanity: — The various institutions in charge of the State Board of Insanity are obliged to turn over the receipts from the sale of farm products to the State treasury. They cannot utilize these receipts directly to buy farm implements or to improve the farms. No matter how efficiently a farm may be managed, the hospital is not allowed to use the earnings to make an improved showing from year to year. It is expected that farms connected with State institutions shall be conducted in such manner as to serve as an incentive to the community, showing what can be done in the different sections by scientific and improved methods of management and handling.

Under this circumstance the hospitals are at a very great disadvantage. The system has been severely criticized, and we expect that out of this discussion a better method of giving a fair show to each hospital may be suggested.

Dr. Walter E. Fernald, superintendent of Massachusetts

School for the Feeble-minded:— In a perfectly well-regulated institution there would be no problem as to receipts from the sale of farm products, for a large institution is a sizable community, and if the industries are sufficiently diversified to furnish the proper variety of occupational and therapeutical training for the various classes of inmates, the home institution will consume all of the products of the labor of the inmates.

There is every reason for having a large variety of industries in order that the inclination and capacity of each patient may be considered, that the patient may be transferred from one occupation to another, etc. If one institution should specialize largely on shoes, or the weaving of cloth, or the making of clothing, etc., to the exclusion of other interesting work, much of the beneficial effect of the varied training would be greatly missed.

The influence of the occupation on the patient is the first point to be considered. The mental and physical benefit which he receives is the main product, and the finished work itself, whether it is to be eaten or worn or used in any other way, is a by-product.

It has been my experience that the patients are much interested in making or producing things which they see used in their own environment, and which they know are really necessary for the common good.

The patients are not so willing to work steadily at the production of articles which they know are to be sold and turned into money. If the products of their labor are sold, the patients or their friends wish to receive a very large share of the amounts obtained from the sales. In the hospitals for the insane or the schools for the feeble-minded the sums received for articles sold will always constitute a very small item.

The pecuniary benefit to the institution and to the State will show itself in the lowered per capita cost for maintenance, or in the saving in the construction of new buildings, or additions to buildings.

I believe that each institution should produce finished material of any one kind sufficient only for the needs of that institution. Our institution, for instance, should weave rugs enough

to supply our own institution, and when that limit of production is reached, the attention of the people who have been making rugs should be directed to some other industry. The same thing would apply to the weaving of crash, the knitting of stockings, the making of clothing, etc. In this way only will it be possible to hold the interest of the patients for a long period.

The same principle applies to the farm products. It is possible to so regulate the productiveness of the farm, the dairy, the gardens, the orchards, the poultry yards, etc., as to produce in a given institution a quantity of any one product sufficient only for the needs of that institution.

The question of increasing the productiveness of the vegetable gardens, the small-fruit gardens, the orchards, the dairy and the farm in general to an extent sufficient to supply our own institutions will constitute a real problem for a long time to come. It requires some imagination even now to see a time when our farms will supply all of these products that we need.

It should be possible for the different institutions to informally make an arrangement whereby any unexpected surplus of farm products or of manufactured materials could be distributed at market prices to the other institutions.

Dr. Briggs read the following letter from Dr. Edward French, superintendent of the Medfield State Hospital:—

I thank you for your letter of May 12, inviting me to prepare a paper to read at the next conference on May 23. I regret that I shall be unable to attend that conference.

I think it possible to arrange some way in which there may be a greater benefit from the industrial efforts of the patients. This possibly could be brought about by specializing among the institutions. As an illustration, one institution could weave cloth for various purposes to be used at other institutions; another might manufacture boots and shoes; a third might find it of greater advantage to raise beans or potatoes, and so on. These could be elaborated to quite an extent, although if it were carried too far I can see that it might result in too much routine and not enough variety in the kinds of work furnished for patients. It certainly is desirable to have a variety of occupations so as to fit individual patients with something that is best adapted to their liking and needs.

The employment of patients has only just begun, and in my opinion it will be elaborated to a surprising extent, more so than we of to-day

have any idea or conception of. Of course, it follows that the greater number of patients that can be employed, the greater the benefit both to them and to the institution.

I regret that I shall be unable to be present at this conference, and hope that I may be of some use at the next one in November.

Dr. Charles E. Thompson, superintendent of Gardner State Colony:— In considering the subject "Receipts from the Sale of Farm Products," I have in mind the broader subject, — receipts from the sale of articles produced through the efforts of hospital patients, *including* the sale of farm products.

We must consider, first, the reason for production; second, the likelihood of overproduction necessitating disposal; third, *if* overproduction, the best method of disposal.

The object of first importance sought in occupying the patients of our institutions is the beneficial effect upon the individual patient. The financial return to the individual, the institution or the State must be secondary; perhaps frequently a close second, but the *result* of treatment by occupation, not a *reason* for it. I believe we in our enthusiasm to show results should continually have this in mind, as otherwise a spirit of commercialism will creep in. Such a spirit is not only undesirable but unnecessary, and would, if fostered, cause certain reactions to follow that would do much to restrict the activities of our patients.

In our farm operations there is, it seems to me, much less likelihood of difficulty than there is in the production of articles made in our shops. Out-of-door occupation also offers more to the individual patient and a greater return to the State than do many of the indoor industries, some of which have been grouped under the head of busy idleness. The occupying of women in out-of-door pursuits has been attempted only in a small way in any of our institutions, much less now, I believe, than twenty-five years ago, when in some of our hospitals women assisted in real farm work, milking cows, etc. Out-of-door work offers, in my opinion, a most valuable means of benefiting individual women.

Our efforts in industrial therapy should be to benefit the patient, and if possible at the same time produce something worth while for the patient who is occupied, for the benefit of

other patients, or the institution. I believe it desirable to go slowly in making or producing articles largely because they may have a sale value, when we could fully as well, and, in my opinion, better, produce something of real use for the institution which otherwise would have to be purchased. As examples of this I should mention clothing of all kinds for both men and women, shoes and slippers, underwear, hosiery, hats, caps, mittens and gloves; as well as furniture, bedsteads, mattresses, pillows, blankets, etc., — articles too numerous to mention which every institution purchases to a greater or lesser extent. By producing these necessary things we will largely avoid any criticism that we are competing with normal labor, and will avoid as well the need of considering the reimbursement of the patients occupied, many of whom expect *money* reimbursement if articles are made especially to sell. Where articles are made for use within the institution I have seen but little of this.

It is the restriction of their liberty and not their care in the hospitals of which patients mostly complain. It is therefore not uncommon to hear a patient remark that he is receiving no pay for his labor and should be released. It is quite as common, however, to see this same patient continue to work interestedly on the article before him, even while saying this, because of his real interest in producing something worth while, especially if it is for his or his associates' use. I believe strongly that our efforts should be directed towards producing worthwhile articles which otherwise we would have to purchase or go without.

Certain articles are made, however, such as raffia baskets, some fancy work, and the like, that benefit the patient making them, and, not being of special benefit to the institution, can be sold, and sold without unduly competing with normal labor. I personally have always felt that such articles should be placed on sale at the institution so visitors could buy, but should not be sold through publicly advertised sales conducted in near-by cities and towns. Establishing sales rooms would mean competition to a greater or lesser degree. If real and noticeable competition should result I should expect in time to see certain restrictions advocated which might seriously handicap us in *many* of our activities. If there were sufficient to gain we would

have plenty of reasons, no doubt, for being permitted to sell, just as does now the Commission for the Blind; but as I before stated, there seems to be no reason for this, as each of us already has such a ready market within our own doors.

Previous to 1911 it appeared that one of the difficulties standing in the way of development of arts and crafts was the purchasing of supplies from the maintenance appropriation, and the requirement that money received from articles sold should be deposited with the State Treasurer, there being no return to the institution during the same year. Income derived from sales, or otherwise, was, to be sure, returned to the institution as a part of the next year's appropriation, but this knowledge did not appear to be an incentive, as money for maintenance was forthcoming whether or not there were any receipts from the previous year. The directors and instructors of industries sensed this, and also often found it difficult to obtain supplies because of the numerous demands in other directions. It was with a view of offering an incentive that the Trustees of the Gardner State Colony recommended to the State Board of Insanity and Legislature of 1911 that the institutions be granted an industry fund, from which materials could be purchased, and to which money received from sales could be added, so that a return could be had immediately. This was enacted into law as chapter 480, Acts of 1911, and has done considerable towards stimulating arts and crafts.

It was expected and urged that farm operations would be considered an industry, but the committee which considered the bill declined to include them, and the department of the Auditor has ruled that the receipts from the sale of farm products shall be deposited as formerly with the Treasurer of the Commonwealth. Therefore, so far as selling farm products is concerned, there is the same lack of incentive as before. I doubt, however, if incentive to sell is especially needed in this direction, inasmuch as the difficulty is not in the selling, but in raising enough at each institution to supply the needs of that institution. Some, perhaps, can raise more of one crop than another, and more than they can profitably consume, but unless an institution is raising all the vegetables, hay, grain and fodder it consumes, it undoubtedly would be more profit-

able to raise only enough of any one crop for its own use, and endeavor to raise more of the crop which previously had been purchased.

I know of no institution farm that is now raising more of all crops than it needs, but if there are any it is doubtless easy to dispose of any surplus, simply by submitting quotations direct to the institutions or to the purchasing agents who meet monthly. This same market could also be reached through the financial agent of the State Board of Insanity, who, because of his intimate associations both with the purchasing agents and the needs of the institutions, could advise as to what institution might at that time be in need of the surplus in question. It occasionally occurs that with abundant crops in any one year more of some vegetables are raised than are needed, but as all institutions cannot produce these same vegetables in sufficient quantities, it should always be easy to dispose of them as described. So far as possible, I believe, such products should be sold to other similar institutions.

At some distant date there may be institutions that will raise all they need and more, but with the increasing population of our hospitals I believe this to be a long way off. Then, however, as now there should be a ready market at other hospitals, this market always easily reached through the purchasing agents or the financial agent of the State Board of Insanity.

Dr. O'Meara:— This conference is honored by the presence of a gentleman from the Auditor's office I will call upon Mr. Merrill.

Mr. Warren A. Merrill, assistant supervisor of accounts, Auditor's department:— I have not much to say on this subject. The statutes say that all money received must be turned into the treasury, and it is the duty of the Auditor to see that the law is complied with. I would be pleased to answer any questions which you care to ask on the subject. I would say, however, that the institutions get credit for their sales in their financial statements and in their per capita within the year in which the business is done.

Dr. Briggs:— Supposing that Dr. Thompson at Gardner should be able to raise a good many more potatoes than some other institution which needs potatoes, and the other institu-

tion raised a great deal more of some other product; couldn't there be some arrangement, without interfering with the Auditor's department, whereby those two institutions could make an exchange?

Mr. Merrill: — There is no law under which you could do so at the present time. The law is specific — after the sales are made receipts from the sales must be turned into the treasury.

Dr. Briggs: — Must the sales be made at the market price?

Mr. Merrill: — Of course, if you did interchange you would not have true analyzed expenses. If two institutions exchanged turnips for potatoes, neither would show in its analyzed expenses that it had made the purchase.

Dr. Briggs: — Couldn't the same be charged up and in some way equalized?

Mr. Merrill: — That would cause complicated bookkeeping. There is no objection to the sale being made, but the money must be passed and turned into the treasury.

Dr. Briggs: — The prices could be fixed according to market prices.

Mr. Merrill: — I presume the State Board of Insanity and the trustees of the institutions fix the prices. I do not think the prices would come under the jurisdiction of the Auditor's department. Unless the institutions are near together and are able to ship in carload lots, they cannot supply the other institutions at the market price.

Dr. Thompson: — I would like to ask if there is any objection to exchanging turnips for potatoes?

Mr. Merrill: — There is no law allowing such exchange. The only place where the sale of goods is mentioned in the statutes is in chapter 6: "If sales are made the proceeds from such sales shall be turned into the treasury monthly." This is the only mention of sales in the general statutes except in the act relative to industries.

Dr. Thompson: — It would not be expected that if we exchanged it would show as a purchase or sale? It would not be sanctioned by your office if an even exchange?

Mr. Merrill: — There is a difference of opinion about that. I am instructed to state at the present time that a ruling was

made some three years ago by Mr. John E. White, then Auditor, that he would allow bills for the exchange of things that were similar, such, for instance, as a horse for a horse, or an engine for an engine, showing the transaction on the voucher, but exchanges of things in any way dissimilar would not be allowed.

Dr. Briggs:— Could I ask you now to explain the prison situation — how they get their money? Is there a special law?

Mr. Merrill:— You mean the industries fund? That is a special law.

Dr. Briggs:— Do the prisoners get any benefit from what they do?

Mr. Merrill:— Not at the present time. A bill was introduced into the Legislature this year to authorize the paying of prisoners for their labor, but I do not know what progress was made on it.

Dr. Briggs:— Is it only a city ordinance where a prisoner gets something for his family?

Mr. Merrill:— There is a statute relative to wife-beating which allows the wife 50 cents a day while the prisoner is confined, but it is not necessary that the prisoner work. The money is paid to the family.

Dr. Briggs:— Could that be extended so that the families where the State Board of Insanity receives the patient from the community, who has been a wage earner, could receive assistance by the patient earning something on the farm, which will go towards the support of the family on the outside?

Mr. Merrill:— The same question has been agitated by persons interested in prison reform. I understand that it is a law in some States.

Mr. Lehman Pickert, trustee of the Boston State Hospital:— Mr. Merrill, you stated a little while ago that if one institution turns over its receipts from sales of surplus products it is placed to the credit of that institution. Is that merely a matter of bookkeeping, or when that institution at the end of the year makes up its budget and asks for a certain amount (which usually is cut down), is it taken into consideration to restore that surplus? Do we get the benefit of it?

Mr. Merrill:— There are two laws governing institution ap-

appropriations. The appropriation for the State Farm, illustrative of one group, is made as if it had no receipts, while that for the Danvers State Hospital, illustrative of the other group, is reduced by the amount of its receipts of the previous year; or, in other words, the Legislature appropriates an amount which, plus the receipts, will equal the total amount necessary for the year's maintenance.

The reason for these two classes of institution appropriations dates back to 1902. Prior to that the institutions for the insane lived on their own earnings, asking the Legislature only for sums for new buildings and extraordinary repairs. Therefore, as far as maintenance was concerned, they conducted business just as any individual or firm. From time to time, beginning with 1902, legislation was enacted bringing the finances of these institutions more closely under the control of the State, until in the last act of the Legislature in 1905, as a compromise, the receipts from the board of private patients, reimbursing patients, sales, etc., were handled as before stated. An examination of the receipts of this latter group of institutions will show that they are made up largely from board of patients which is paid by individuals. It would appear as if the Legislature, when this compromise was made, had in mind that a receipt for board would more properly be credited directly to the institution. If a close study of expenditures is made, the net cost is more clearly discernible when handled in this manner.

Dr. George M. Kline, superintendent of the Danvers State Hospital: — In connection with the farm products, as, for instance, at the Medfield institution, where they have an exceptionally fine herd of thoroughbred Holsteins, with a surplus of bull calves, for which a very good price can be obtained, it would be a great advantage if, instead of turning the money into the State treasury, they could dispose of them and have the money available for buying new blood, or hay for the cows if their farm is not large enough to produce a sufficient quantity.

In connection with the sale of other products, the thought occurred to me, not so much to make an outlet for institutional products of the arts and crafts department, but to teach the inmates in the institutions some occupation that would be valu-

able to those patients after they left the institution, and so enable them to find other employment; to establish a central bureau to which certain products could be sent from the institutions; and more especially to make available a place to sell the articles manufactured by patients after leaving the institution, and in that way enable them to secure employment. I thought it might help the social service department to that extent.

Dr. Arthur V. Goss, superintendent of the Taunton State Hospital: — I believe that the institutions should have an opportunity to use in a proper way their receipts from the sale of farm products. The secretary of the New York State Hospital Commission, in discussing the same question, pointed out what seemed to me very ridiculous, and that was that one of their institutions had land that was well adapted to raise rye but could not raise good wheat, and if they were allowed they could take that rye to the mill and exchange it for wheat flour, which was better adapted for the use of their patients than rye; but they could not do it; they had to actually sell the rye and return the money to the treasury, much to the damage of their maintenance account.

I really feel that it would be a benefit to our institutions if we could exchange. Of course it would require special legislation to do it, although what has been said about the law I cannot exactly agree with, because I know that some years ago the law was differently interpreted.

Dr. H. O. Spalding, superintendent of the Westborough State Hospital: — I do not see how very much can be done without special legislation, but if there is an attempt to exchange the products of one farm with another, it would seem that there would have to be some way of bringing the surplus of one institution to the attention of the others through some co-ordinating officer or bureau.

Ernest V. Scribner, M.D., superintendent of the Worcester State Hospital: — I agree heartily with the proposition as put forth by Dr. Fernald, that the proper way to handle this is by regulating your products so that you will be your own customer. Of course it is not possible to absolutely bring this about, but I believe it to be the best solution.

If, on the other hand, an institution does, because of superior facilities, raise more of one product than it can consume itself, it seems to me that institution should have the privilege of exchanging it, or of turning the money into the treasury and having it credited to the maintenance fund of the same year.

I think we should all in this discussion not lose sight of the fact that our institutions are for the relief of suffering humanity and are not manufacturing concerns primarily, and that anything we do in this line is simply to uplift and improve the condition of the patients.

I cannot help feeling that there is something wrong in the State laws which enable certain institutions to pile up a large surplus from their manufactures. It seems to some of the institution men, at least, that this is at the expense of the prices which the institutions have to pay. Of course that is law. I feel that not only the institutions for the care of the insane, but the institutions for the care of prisoners and for all of the dependent classes, should be brought into a little closer co-operation with each other. In the earlier days the Auditors were not as strenuous with reference to trading as they are now, and they used to allow us (as one gentleman has spoken of) to trade a horse for a horse and a cow for a cow. One gentleman has asked if we could trade a horse for a lamb. I never heard that brought up. I know at one time when I tried to credit a lot of pork on a beef bill I was told that was going too far.

Dr. J. F. Edgerly, "Sherwood," Lincoln, Mass.:—Dr. Fernald's plan for each institution to produce just the kind and quantity needed for its use is ideal, and would solve the problem if it worked, as, indeed, it should in producing things manufactured.

But with farm product it is more difficult, owing to difference in soil, cultivation, exposure, elevation and irrigation. Some farms, therefore, will yield abundant crops of, for instance, grain, hay and grass, and will not grow other crops as well. Another farm is better suited to yield vegetables, fruit, etc., not growing hay and grain as well.

The greatest economy to the State consists in furnishing industrial occupation to its patients,—not so much for the market value of the product of their labor, as in the benefit

to each patient employed. Yet we should not lose sight of the duty to make such employment yield its best value. To this end I will suggest the following plans: —

First. — To cultivate and raise on each farm that which it yields the best. By this plan an institution will raise more of some crop than it can use, and less of some than it needs. As I understand the present usage, all produce in excess of that used by the institution that raised it is taken over by the State, without material compensation to the institution that has taxed itself with a considerable expense in fertilizer, tools, machinery, etc., in order to cultivate the ground and raise the crops, and also has to buy such provisions as it cannot raise on its farm. This is discouraging to the superintendent of the institution, who must appear to make a poor showing, and has because of it to ask the State for a large appropriation in order to do his duty by his patients. Those who pass upon the appropriation may not know all of the facts that cause the need. This condition can be improved by an exchange of excess products, either by the institutions or by a State commission taking over all excess produce at their value, thereby enabling each institution to supply itself with what it cannot raise by using what it received by the sale of its excess crop.

Second. — To so cultivate and make the needed change in soil and condition of each farm that each may yield the kind and quantity for its needs.

This plan will be expensive, and will call for expert knowledge in agriculture, besides taking considerable time, but it is quite possible. Either plan will prove better than the present practice.

Mr. Charles E. Ward, treasurer, State Board of Insanity: — I want to apologize for not being here during the early discussion, but I have for more than an hour been going through a more rigorous investigation by the chairman of the ways and means committee than I ever gave you when you came before me in regard to your maintenance appropriation. Unexpectedly I was called in to deal with these appropriations which you are all asking for, and had an unhappy time for an hour.

I was glad of my introduction, because it is the first time the chairman of this Board has ever admitted that I was a practical farmer.

I became interested in this question because of the condition of the farms. It seemed to me necessary to bring the institution farms, if we could, to the natural condition of farms in general. What we do in the country, you know, is to say to a young man when he starts to be a farmer, "More crops, more cows; more cows, more milk; more fertilizer, more crops; and make two blades of grass grow where one did before," and what he gets in one line he extends in another, so that if he has hay to sell he can buy cows or whatever else is needed for the farm, and he has a chance, if he is a capable farmer, of taking care of himself in that way. You do not have this chance.

For instance, at Medfield they sold \$1,900 worth of calves. They were thoroughbreds. They turned the money into the treasury and had to take from their meager maintenance appropriation money enough to buy two cows, which almost broke the heart of the superintendent, and that, it seems to me, is a condition that no theory should stand in the way of remedying. It is not my notion that you develop farming to the extent that you do commercialized farming. The actual accounting is such that the Auditor's department could control the situation.

The institutions ought to be permitted to take their surplus and transfer from one to another so that they will be like the farmer, — the more he raises the more he will have to sell, and the more he sells the more he can raise. The more our institutions have the poorer they are.

Talk about raising potatoes and having a surplus. It takes fertilizer. My colleague here, who is not a farmer, asked me a year ago why Gardner, for instance, could not raise potatoes for some of our less favored institutions, and I said the reason was that to raise potatoes for these others they had to have some money to buy fertilizer, and fertilizer money did not come very easily. If, for instance, Dr. Thompson had a car-load of potatoes to sell (if he were to report it at the Auditor's office, which would be all straight and square), and he could turn the proceeds into buying more fertilizer to raise more potatoes and more of some other crop, it would meet the difficulty.

My own notion is that you have not begun to touch the possibilities of the farm as an adjunct to an institution to help it out in its maintenance, and I say it is a burning shame for Massachusetts to have three or four or five hundred acres of land in farms about the institutions, and then have you so handicapped that you cannot farm as the man just outside farms. I believe myself that if you could get together on legislation that, on the one hand, would not let you run wild, and on the other hand would give you the benefit of the receipts from your farm products, you would solve this problem. Now, if one institution has more potatoes than is needed, and less turnips, why should not there be some way that the institution could make an exchange and buy that thing which it lacks with the thing which it has a surplus of? That is the law of life, and no artificial method should come in to prevent its fulfilment.

Northampton Hospital has a productive hay farm. They buy grain. Why should not they sell hay and buy grain if they have more hay than they need for their own use? Why shouldn't Northampton do it? What is the harm? What is running loose in finances to let Northampton sell hay and buy grain? In keeping up the fertility of the farm the superintendent buys more fertilizer with the money he gets for a ton of hay two or three times over than the hay would furnish. I believe it is possible to have legislation that will restrict you to the practice of dealing among yourselves, and yet will allow the surplus of one place to go to another on terms that do not bankrupt the one who has the surplus. I cannot feel at home in a condition where the more prosperous we are the poorer we get, and if you have awfully good luck on your farm you have got to starve your people in some other direction.

Now they tell me at the Auditor's office that the institutions get credit the next year. You see how you get credit on your maintenance. They say, "Receipts, so much," and then cut that right out of what you need, and you get just so much less by your receipts and it doesn't amount to anything. It is just simply a comedown from the old days when your receipts did amount to something on the farm.

As to the per capita cost, I do not believe that your farmer is paying any attention to per capita costs, and I doubt some whether it affects the institutions so that the superintendents get fat over the per capitass because of receipts from their farms.

Every one of us, with all the restrictions of the Auditor's office having to do with the matter of bookkeeping or accounting, could make the farms much better than they are, and could save the Commonwealth money, and could, by doing the institution work in a common-sense way, as the man outside does, make the State the gainer in products saved. I am advocating this that you may have more money to spend to live on, and that you may have the farming industry developed as it ought to be. There is no institution in this State that cannot out of its industries create a fund big enough to establish that fund so that the more you make the more you have. If you can get not more than \$1 under the law now, you can start an industries fund because the labor of patients in that industry can be turned over every month, and what you have one month you can draw upon the next. The farm products should come somewhere in that line, so that if you have more of one thing than you need you could turn it for something else, or buy fertilizer to do more with. The farm can be made a valuable adjunct, but it is like asking a man to run when you tie him or have him hobbled so that he can hardly walk. You can never have the fullest farm development in an institution until something of the freedom I have outlined is given.

The first semiannual conference of the Massachusetts Commission on Mental Diseases and the trustees of the different institutions was held at the State House on Nov. 21, 1916. Dr. George M. Kline, director of the Commission, presided. The subject for discussion was: —

What Measures should be taken to meet the Shortage of Nurses and Attendants in Our State Institutions?

The views of the different speakers as expressed at this conference were as follows: —

Dr. George M. Kline, director of the Massachusetts Commission on Mental Diseases: — After the notice for this meet-

ing had been sent to the printer, it developed that a committee of trustees had formerly selected the topics for discussion at these conferences. However, the shortage of help generally in the institutions, and more especially the shortage of nurses and attendants, is such an acute problem that it was thought a worthy subject for full discussion this morning. It is hoped that the causes for the shortage can be fairly well agreed upon, in order that some definite program may be laid before the Legislature this coming year to remedy the difficulty.

The shortage of nurses, of course, always exists at the institutions to a certain extent, but this last year it has been especially great, due, no doubt, in part to the war and to the scarcity of labor generally.

Of the measures that might be presented to remove the difficulty, one is being attempted now by the Supervisor of Administration's department (formerly known as the Commission on Economy and Efficiency); and it seems that this offers a possible solution, namely, to standardize the classes of service in the various institutions, and to adopt a scale of wages for the various types of service, and then have this schedule enacted into law, rather than to agree among the institutions themselves and endeavor to convince the legislative committees each year. If such a schedule is adopted and enacted into law it would seem that it not only would prevent one institution competing against another, but would also do a great deal toward keeping the ranks of our nursing services filled.

The Commission has asked certain gentlemen to present papers dealing with the difficulties; and, not unmindful of a former conference in which it was pointed out that the meeting should really be one of the trustees and, at that time, the State Board of Insanity, the Commission has asked Mr. Whitman, chairman of the Board of Trustees of the Gardner State Colony, to begin the discussion.

Mr. Edmund A. Whitman, chairman of Board of Trustees, Gardner State Colony: — I am not presenting a paper that I am going to read. As a matter of fact I have no paper, but merely a few statistics from our superintendent.

I assume that the chairman asked me to speak because the Gardner Colony seems to be one institution which has not been

troubled with getting employees. During the year it has had substantially a full number, and not very much difficulty in getting people to replace those who left.

If you will look at the statistics which have appeared from year to year for several years, you will find that while Gardner has had its troubles in the rotation of employees, that rotation has been less than in any other of the institutions given in that table. Is there any real reason for it, or is this some fortuitous circumstance due to some magic power on the part of the superintendent?

Let me apparently switch off from the subject and give a little sketch of what Gardner was started for, and what it is. I will go a step farther back than that, to remind you that there was a time, one hundred years or more ago, when insane people were treated more or less like criminals. Even here in New England you would find them chained in woodsheds back of the houses, especially the violent ones. A revolution in public sentiment came, and we put them into institutions and treated them humanely and kindly. Some of the great arks which exist in this State now, which most of us regard as wholly unsuited to the purposes to which they are devoted, were built at a time when the public thought that the "cold storage" institution was all that was needed for the mentally sick.

The former secretary of the State Board of Insanity, Dr. Copp, with his foresightedness, seemed to have a brilliant flash of imagination in the establishment of the Gardner Colony. If you will go back to the reports of the State Board of Insanity for 1900, and about that time, you will see that they classified the insane into three classes: (1) acute and curable; (2) custodial, who are more or less violent and not to be let out; and (3) quiet, chronic insane, who could be induced to do something towards their own support.

The Gardner Colony was founded on the plan that you could take these quiet, chronic patients and put them into primitive conditions where they could weave their own clothes, make their own shoes, chop their own wood, till their own land, grow their own vegetables, and generally go back into the conditions under which our ancestors lived when this colony of Massachusetts was founded. The theory was a good one, and we

proceeded to take the patients and put them into more or less simple buildings.

As you approach Gardner Colony, you will see the usual eyesores of large brick buildings for the reception of patients. No one regrets their existence more than I do; but they are there. Except for the receiving group, we are placing the patients in small buildings throughout the 1,500 acres of land, in as nearly as possible homelike conditions, and giving them some occupation adapted to their capabilities; so that, at the present time, something over 90 per cent. of the patients have some occupation taking, if not the whole day, at least a part of it.

Has that condition of affairs anything to do with the fact that the nurses and attendants and employees rotate less frequently at Gardner than at any of the other institutions?

If I can draw any deduction from the situation, it is that the way to keep a man in any employment is to treat him like a human being and give him a man's job. We have demonstrated that with the patients themselves. Patients who have been sitting around the "cold storage" institutions for years, with nothing particular to do, and are restless and unhappy, have been set to work and have probably earned their own living, and have improved materially and visibly in physical health and in mental condition. These patients do not work by themselves, and the so-called attendants are in most cases instructors and take part in the work which the patients are doing, and more or less direct the work, with the result that the attendants have a feeling that they are doing a man's work and not standing around in the institution trying to keep people quiet and still. I have a very strong feeling that that has something, and perhaps a great deal, to do with the situation. Of our attendants, of course, there must be some who are still of the purely custodial variety, who stand around and see that the patients do not get out and run away, or break each other's heads, because even the quiet, chronic insane have periods when they are not quiet. It is with that class of employees that there is the greatest rotation. Those who are given something to do, and, perhaps subconsciously, feel that they are a part of the institution, stay a longer time.

Last year when we had a fair for the patients, — a real country fair where we invited the public in, — and had about 1,600 people come to see our fair, it was necessary to raise some money to provide for outside attractions. You cannot go to the State Auditor and ask him for money for peanut stands or for a merry-go-round, so we had to raise the money. The employees were gathered together and asked for a contribution, and they were sufficiently interested in their work to subscribe something like \$85, which added materially to the success of the fair.

Of the 143 employees that we have with us, there are 108 who direct the work of three or more patients. Thirty of these 108, or a little less than a third, have been with us for six months or less. The remainder, or 78, have been with us for more than six months. Thirty of them have been with us for three or more years.

I think you will all agree with me that the real difficulty comes in getting your attendant interested to stay long enough to find out what the institution is for. The real rotation comes among those who are there for three months or six. Our figures show, as yours do, that the man or woman comes, and in the course of the first few months is dissatisfied for one reason or another, thinks he or she can get a better job, and departs somewhere else, probably to some other institution, to go through the same performance there.

The first colony we started was an old building, and we spent probably money enough repairing it to build a substantial new structure; but with all the additions and improvements that we have made in it, we have not yet succeeded in taking out of it the quality of its having been originally a *home*. The result is that the man who was put there in charge of it fifteen years ago is there now, and the dozen or 15 or 20 patients in the present grouping are a contented set of people and are working together running the farm. His employees stay longer than I imagine the employees do at some of the other institutions serving the Commonwealth.

There is an additional advantage in getting persons to stay some length of time, because, if they stay, they send for their friends or invite their friends, feeling that it is a pretty good

place to be; and we have had a substantial number of employees who have come to the institution on the invitation of employees already there who are satisfied with conditions.

Of course, with us as with you, after the employee stays his first three months or six, his pay is increased, and that also tends to solidarity in their forces.

We have given some attention to the housing conditions; and in some way or other, probably because we convinced the Legislature that we could build cheaper with small wooden buildings than with large brick ones, we have a number of comparatively small wooden buildings for the employees, giving a homelike quality which the employees like. When you have a building with perhaps a dozen in it, there is apt to be more social life than in a nurses' home with 100. These buildings are adapted so that if an attendant chooses to marry he is not obliged to leave the institution. That difficulty extends beyond the employees. Our assistant superintendent, one of the most competent young men in the State, left the Danvers Hospital because he wanted to marry, and there was no place for him there; and Gardner, while far in the country, offered him a cottage where he and his wife could live a normal home life.

We have a baker who has been an institution man all his life. After he had been with us some time, his wife, who had nothing to do, grew restless and they wanted to go. About that time an old cottage was remodeled and the baker's wife was put in charge as housekeeper, with about a dozen patients, and soon a more contented woman was not to be found in the institution.

I could give other illustrations where people have been with us a long time because they have been given a real job. I do not mean to say that the attendant appreciates that in his first three months. It takes some time for that to get under his skin, — that he is really taking a part in the work of the community; and perhaps if you asked him he would not realize to-day that that is one of the things that interest him. But my guess is that the subconscious feeling is one of the things, at least, which retains the employees in our institution apparently longer than in some of the other institutions.

To give you a further impression that I am giving you a paper, I might read the closing remarks of Dr. Thompson's letter, giving some interesting statistics as to the nature and kind of rotation of employees which occurs at Gardner, a general outline of which I will endeavor to give.

It appears to me that the classification as "attendants" does not show our whole story correctly, inasmuch as many others of our employees are classed as housekeepers, waitresses, instructors, supervisors and assistants of various kinds, whereas the work is done by patients under their instruction, and they are attendants in fact although classified otherwise. Therefore I have studied all employees on the pay roll to-day (143, exclusive of M.D.'s).

Of the 143, 108 direct daily 3 or more patients; 35 direct less than 3 in many cases.

Of the 108, 20 men and 10 women have been at Gardner less than six months; 5 men and 6 women have been at Gardner between six and twelve months; 7 men and 9 women have been at Gardner between one and two years; 8 men and 13 women have been at Gardner between two and three years; 20 men and 10 women have been at Gardner three or more years.

The above presents data especially as to their service. I can find no reliable data showing that "attendants" when they first come stay longer when given any one kind of work, except that we have our greatest difficulty in the "receiving wards," and somewhat greater among the inside attendants. The outside attendants, especially at the cottages, change less frequently, but here again there seems to be great variation, due, I think, to the way the different supervisors direct their new men. At the Westminster and Belcher cottages there is frequent changing; at the other cottages much less, and the men apparently are more contented. Changes among the instructors, supervisors, mechanics, etc., are infrequent.

I think, without going into any further statistics, I have substantially covered all that I have in mind, except one thing which I have thought of many times, and that is, what can be done with the attendants who necessarily are confined to purely custodial work with the more violent patients? That is not a job which appeals to anybody. I cannot conceive any more wearisome job than standing around and trying to keep noisy patients quiet. I do not know anything that will keep these people at work constantly, apart from very large salaries, other than some religious sanction. I have always thought that if we could get one of the Catholic orders, or one of the

Episcopal orders, to send their women, their Sisters, into the institutions to take care of these patients, these people, feeling they were doing service for God as well as for the public and humanity, would stay permanently.

Dr. Kline: — At a few of the institutions the employees have organized clubs, with the approval of the hospital authorities, and that phase has been thought an efficient one in keeping the employees contented. A member of the Commission had the distinction, as superintendent of an institution, of securing from the Legislature of the State in which he was located an appropriation for the first club house for State employees, I believe, in this country; and I have asked Dr. Pollock to speak on that phase.

Dr. Henry M. Pollock, member of the Massachusetts Commission on Mental Diseases: — Dr. Kline asked me to talk to you very informally, and for not more than ten minutes, on the influence that clubs and club houses might have in securing and retaining desirable employees. Possibly we can define a desirable employee by giving an illustration of an undesirable one. We had a nurse not long ago come over to Connecticut, I believe, from Massachusetts, who did not remain with us very long, and when she went away, after some two weeks' residence, her comment ran something like this: because "they had too many mutual baths;" that in the institution where she had worked before, when patients became disturbed, instead of giving them a mutual bath they gave them an "epidemic."

If you will pardon a personal allusion, I think that perhaps I am somewhat more interested than the average superintendent has been in the welfare of nurses and attendants, because it was my good fortune, during my college and medical course, to serve for some six summers in that capacity. That was some years ago when we did not have the pleasant surroundings that most of the institutions now have for the care of their employees. We used to sleep on the ward, and upon what ward we worked depended very largely whether we were or were not kept awake all night by some noisy patient in the next room. As I remember it, we went to work at half past 5 in the morning, and left off at 8 o'clock at night, except two

evenings in the week, when we were required to work until 10 o'clock. We had a half day off a week, if the hospital had sufficient employees, and sometimes every third Sunday. I know that you cannot obtain or retain desirable employees if they are required to spend these hours on duty.

Now in regard to clubs: We tried several experiments in the way of clubs. We had at various times reading clubs, educational clubs and debating clubs, and evening schools. We also had a mutual benefit association. We went carefully over the pay roll and found that if each employee paid 15 cents a month, a sick benefit of \$10 a week for six weeks could be paid, and in case of death \$40 could be given to the family for funeral expenses. The association was kept up for a time, but finally, I believe, the State Insurance Commissioner of that State decided that it was illegal and it had to be dropped.

In Connecticut, where it was my good fortune to be the superintendent of a State Hospital for some twelve years, I felt that if we had a club house for employees, — a place the employees could call their own, — managed by employees, we might be able to attract the better grade of employees, and be able to keep them, and in my annual report to the trustees under date of Sept. 30, 1910, I made the following comment: —

The desirability of retaining in the employ of the hospital properly trained nurses has been referred to in another portion of this report. It is equally desirable the hospital should not lose the services of other employees who, from the training that they have received at this institution, or from previous experience, are particularly suited to perform their duties.

Private corporations find it of such economic value to attract and retain desirable employees that they are providing suitable facilities for recreation, and are building club houses, places of entertainment and gymnasiums.

I believe it would be well for the State in this particular to follow their lead, and I would respectfully recommend that you endeavor to secure an appropriation for a small club house, in which our employees when off duty may find needed rest and recreation.

The trustees of the Norwich State Hospital for the Insane felt that this would be a step in the right direction, and during the 1911 session of the General Assembly of Connecticut, pre-

sented a bill making an appropriation of \$10,000 for a club house for employees.

The committee of the General Assembly, known in Connecticut as the appropriation committee, visited the institution, and much to our surprise advocated very strongly that this appropriation of \$10,000 should be made. It was made, and the club house was built. I would like to pass around some views of the interior of the club house so that you can get some little idea of it.

This club started with its management vested entirely in a board of directors chosen from the employees, — four from the employees on the wards and three from the outside employees, all of whom to be eligible must have been continuously in the employ of the hospital for not less than a year. Since its organization the club has continued to be similarly governed.

The hospital furnishes the light and heat, and pays the custodian's salary, and makes the minor ordinary repairs. The club maintains the gymnasium, billiard room and three bowling alleys, as well as teams participating in several branches of athletic sports. You may be interested in the financial statements of the last two years.

Net cash balance,	\$213 69	
Cash sales Oct. 1, 1914, to Oct. 1, 1915, . . .	4,482 67	
(We have a storeroom in the club house and sell lunches, soft drinks, cigars, candy, ice cream, etc. The profit from these sales goes to the club.)		
Initiation fees (\$1) and dues (25 cents for males; women pay nothing, and for that reason do not have suffrage),	388 00	
		\$5,084 36
The club spent : —		
For supplies,	\$3,834 72	
For amusements,	67 00	
For miscellaneous expenses,	257 25	
For supporting baseball club,	472 75	
		4,631 72
Leaving a cash balance of,		\$452 64
(The club has the direct management of all athletic affairs in which the hospital teams participate.)		

The next year of the club:—

Cash balance on Oct. 1, 1915,	\$452 64	
Sales,	4,854 00	
Initiation fees,	415 00	
	<hr/>	\$5,721 64
Expended:—		
For supplies,	\$3,688 00	
Amusements,	155 00	
Miscellaneous expenses,	254 00	
Baseball club,	388 00	
	<hr/>	4,485 00
Cash on hand Oct. 1, 1916,		\$1,236 64

The club at Norwich has been very successful. It has enabled the hospital to secure better employees and to keep them longer than previously. I remember that our rotation of service was much below the average of the Massachusetts institutions.

I know a farmer who has his milk farm a short distance from Boston. He recently informed me that for some time he had had difficulty in securing reliable employees. He studied the question, and discovering that he had an unused room with a fireplace over the barn, fitted it up as a billiard room. The men were allowed to build the fire, cutting the wood themselves, and to play when off duty. The farmer told me that he had succeeded in getting all the desirable men of the neighborhood to work for him, and that the other farmers, in self-protection, were thinking of putting in billiard rooms.

In conclusion, I desire to say that it does not pay the State to educate employees in the work of the hospital for three or four or five months and then lose their services, just as they are becoming of value, and that I really believe a club house for employees at a State hospital is a strong factor in making them contented and in inducing them to remain at the institution.

Dr. Kline:—Mention has been made of the work of the Supervisor of Administration's office in the standardization of wages and salaries in this State, and ex-Senator Burbank is present and has kindly come to tell us something of this complicated work.

Mr. Charles E. Burbank, Supervisor of Administration:— Your chairman invited me to attend this meeting about half an hour ago. I do not mean to imply by that that he was negligent in failing to give me a more extended notice, — probably at the last moment it occurred to him that I might be interested to attend. I state the fact because I do not wish you to have in mind that I have come here with a prepared speech.

I am deeply interested in the question of a standardization of salaries and the general improvement of conditions of the employees of this State. Any efforts along the line of standardization will be a failure unless the purpose to improve the condition and to offer a career to the employees is kept constantly in mind.

It is apparent to me from the little experience that I have had, and the knowledge that I have gained of public employment, that the great trouble is that a man or woman secures a position in some department and then becomes conscious of the fact that there is no likelihood of an adequate return for study and careful attention to duties and effort to secure personal development. Under such conditions, the employee becomes discouraged, and consequently less valuable to the public service. To secure the same interest on the part of the employees that the great private industrial organizations secure, the public employee must be interested in his work, have an assurance of permanent employment, an opportunity for development and advancement in the service in which he engages.

A short time ago the head of the Hood Rubber Company — a concern which employs about 3,000 people — told me that they estimate, after careful study, that the cost of changing an employee ranges from \$250 to \$1,000, according to the skill and earning capacity of the individual. It is therefore quite obvious that constant changes and transfers in the personnel of the public service are a great economic factor.

I wish to say just a word further in regard to this standardization project that is under way through the committee of the Governor's Council. It is one of the great undertakings of the present time along the line of economy and efficiency in the public service, not only in Massachusetts but all over the

country. It was first taken up by the city of Chicago some five or six years ago, then by Pittsburg and Los Angeles, and finally by New York City and New York State.

The Department of the Supervisor of Administration or a Commission on Economy and Efficiency may make endless investigations and may do all the work possible, but to really arrive at a solution of the problem of carrying on the business of the State economically and efficiently in the various departments there must be a standardization of salaries and employments; and in addition to that there must be a central purchasing agency or a central purchasing authority, if the business of the State is to be conducted in a businesslike manner.

When you talk about a central purchasing agency you strike more or less emphatically at the personal pride and ambition of the various boards of trustees who now are in control of the purchasing for the various departments. It is the natural tendency for each department to desire to have as full control of all the details of the business of the department as possible, but the heads of the departments must realize that if large business corporations like the Standard Oil, the Steel Trust, the United States Shoe Machinery Company, and others of like magnitude, should undertake to have each branch of its business do independent purchasing, with no co-operation or co-ordination between the different branches in the field, it would mean a great loss, both in the question of price and in the question of utilization of the materials purchased. There is no private corporation in the world that would be able to run its business on the same basis that the average State department is run without the danger of bankruptcy in a comparatively short period of time.

The great reforms that we need at the present time are along the lines of efficiency and economy. We need publicity in regard to the expenditures and the business methods of the State. To secure this we need standardization of wages, classification of employees, proper organization of the purchasing functions of the State, an executive budget and centralized responsibility.

To go back to what interests you, as you are considering to-day the welfare of the employees of your institutions,—

standardization, — I wish to emphasize this thought: that the important work of standardization of salaries and employments will be a failure unless it results in a betterment of the condition of the employees, — a betterment not necessarily due to an increase of wages in each particular grade, but to a just and equitable opportunity to advance from grade to grade, an opportunity to develop, an opportunity to put all the qualities that the individual possesses into his public employment and bring them into effective operation, as he has the opportunity to do in private employment. In the meantime, while this standardization work is going on, any project or any undertaking which will tend to keep the employees of the various departments of the State contented and happy, and therefore efficient in their work and ambitious to excel therein, is an economical and desirable thing.

Dr. Kline: — Possibly no institution has experienced greater difficulty due to shortage of help than some of the institutions away from the center. I refer especially to Northampton, and have asked Dr. Houston to say something of his trouble.

Dr. John A. Houston, superintendent of the Northampton State Hospital: — Service in a State hospital entailing intimate contact with disordered minds for hours day in and out is far from attractive, though there are phases of it of great interest to those engaged in it.

How to procure nurses adapted to the service and in sufficient numbers is a subject always with us but always new. Sixty and seventy and eighty years ago the superintendents of then existing hospitals were discussing this question at great length, and I may add were arriving at the same conclusions reached by us of to-day.

The numbers will be small till the attractions are sufficiently great, then enough will apply to allow a weeding process to be put into effect. We all desire what the other fellow wants or values.

In an annual report of a former superintendent of the Northampton State Hospital the following was written:—

Of all the many spheres of human action there is none which affords more room for the development of the virtues, or greater scope for their activity, than that of "attendant." Nor is the converse of the proposition

less true; for in no position is it more important to subdue vices and control the passions. If any person deserves to be canonized, it is the perfect "attendant." But canonization is not the fashion of the day.

In one of the reports of the hospital at Worcester the question of elevating the standard of hospital attendance, by retaining in service for a longer period persons properly qualified, by both nature and experience, for the business, is well discussed. Doubtless every superintendent will sympathize with Dr. Bemis in his feeling of the need of such improvement, and perhaps agree with him in the method of its attainment, provided that method can be fully carried out. But its full operation would require a large increase in the number of attendants, at most hospitals, and even more than a corresponding outlay in pecuniary expenditure. This outlay few hospitals, with their present resources, could bear. Among the proposed means of retaining attendants is the promotion "of social intercourse by special privileges and otherwise." As intimated above, with sufficient money to pay a largely increased number of attendants, this might be done; and no one more than the writer of this report would rejoice at its consummation. But, under present circumstances, I am convinced that it is impossible.

This was in 1866, fifty years ago. Ever since then the superintendents have been writing of their dependence upon the nursing service for their success in the treatment of their patients.

Patients are sent to us for various purposes and reasons, — for the public welfare; for the patients' protection from their own selves; that they may be given better care than can be afforded at home; and for other reasons; but they are sent primarily to be cured, if possible, and returned to the community with reason restored, or, if that be not possible, with such mental and physical improvement that they may live comfortably outside the hospital, and possibly be able to contribute somewhat toward their own maintenance.

To this end almost any expenditure in effort or in dollars and cents is defensible.

But many of our patients will live the remainder of their days in the hospital. What is our duty toward them? To do more than feed and clothe them, keep them warm and clean?

We know that many of our seemingly quite demented patients respond to the personal interest and attention of the nurse and physician. Much is said and written nowadays of re-educating the demented; and that great amelioration in their condition is possible is a matter of daily demonstration.

Our efforts, then, are to be directed not only toward promoting the recovery of such cases as are recoverable, to the nursing of those who are ill, and to the care of those who cannot care for themselves, but also to the keeping of all the others busy, and consequently happy and contented, at work, at study, at play, with all the resources of the institution.

To accomplish these results a corps of well-trained nurses is required, and a large number of attendants who possess all the attributes called for on our application blanks, — patience, tact, and, above all, common sense.

How are we to persuade persons of satisfactory qualifications to come to us in sufficient numbers?

Hospital superintendents are agreed that the larger the proportion of nurses to patients the better will be the result, and they are further agreed that the minimum ratio should not be less than 1 nurse to 8 patients; better, 1 to 6, or even 5 but we must keep the poor taxpayer in mind.

Why do we need so many? To nurse our patients properly, with all that implies, to watch the suicidally inclined, to keep patients busy at their occupations, to take them out of doors, to accompany them to the entertainments and recreations, to afford other nurses relief at meal times, and finally to afford a shorter length of service.

But what is the situation throughout the State? Not enough nurses are employed because the Legislature will not heed our requests and grant appropriations sufficient to enable us to employ the proper number of nurses.

What appeals to a person who applies for a situation as nurse in a State hospital? A philanthropic desire to help the unfortunate? A liking for the companionship of those whose reason is dethroned? A ten-hours-a-day association with intellects in many cases so much lower than their own? Hardly. A few — far too few — come with a desire to fit themselves for the nursing profession. A few acquire a liking for the work, or at least a tolerance for it, if the distaste for service is overbalanced by certain things such as the size of the pay envelope and the probability of permanent employment during good behavior. The majority of those who come, however, have no intention of remaining long in the service. Many have come

from home for the first time. They accept service while waiting for something to turn up offering better inducements in the way of pay or of time off duty or of more agreeable and less taxing service or better social advantages. Too many come as a last resort who cannot find other employment, and very many come who have tried in other hospitals and have failed. Every superintendent present will tell you that more than half the applications for service come from persons who are serving or who have served in other institutions, usually unacceptably.

During the past year, with a daily average of 73 nurses, we have had 197 names on our pay rolls at Northampton. Thus almost 2 in every 3 have been tried, and either have been found unsatisfactory or themselves have been dissatisfied. I believe from reports of former years that the proportions throughout the State will be found to be even larger than this, possibly nearer to 4 in every 5.

Do you realize how many nurses are needed in the State hospitals of our Commonwealth? Not considering the general hospitals, private hospitals, charitable and correctional institutions and hospitals for treatment of tuberculosis, the institutions under the supervision of the Commission on Mental Diseases require approximately 1,900 young men and women, and these have to be sifted out of from 4,500 to 5,000 who make a trial of the service; and further, it is doubtful if the 1,900 remain in service an average of two years. These figures explain some of our difficulty in procuring enough help, irrespective of its quality.

How, then, can we persuade enough help of satisfactory qualities to apply for the position of nurse, and how can we keep them in the service? Easily enough. By making conditions attractive to a better class of persons than has been accustomed to apply for situations. Good service cannot be hoped for if nurses are not satisfied.

We have improved conditions much in late years, and much progress is being made.

Of first importance are our training schools. These were established largely to train our nurses for a better care of our patients, but they, the schools, are failures if that be their sole end and purpose. The nurse must be considered. At

present the number who enter our schools for the training is comparatively small, many taking the course because it has been compulsory. The young woman who really wishes to fit herself for a nursing career naturally tries to get her training in the general hospitals, and the State hospitals as a rule, must take those who have not been accepted in the better training schools. The remedy, then, is to make our training schools more efficient. They must offer a curriculum that will compare favorably with any, and that will equip the nurse for her future work. This, happily, we are trying to do. We are raising the requirements for admission to a higher standard. The course has been lengthened and provision made for affiliation with some general hospital where practical training may be obtained in the courses that State hospitals cannot offer. The training schools through the State are being standardized. Curricula and examinations are to be uniform. Nurses will be given the opportunity to fit themselves for State registration.

By these means we may encourage more pupils to take the training, but after they are trained we should still have to consider the desire of the nurse with the true nursing spirit to try her newly fledged wings. If it be desirable to retain her in the service we must offer inducements that will compete with attractions away from hospital service.

Even with excellent training schools bringing more nurses, we shall find the need of many others of the class we have been calling attendants.

To attract these and retain them we offer a training course of a year that will better equip them for their duties. How shall we make their service attractive?

It is a joy to be doing something and proportionate to the usefulness of what we are doing. Patients and employees do not differ from each other in this respect. If, then, our attendants can get inspiration in teaching and in supervising their patients in doing things, they will be much happier and more contented than in merely acting as guards and custodians of our patients.

This is not new. All of us have known it and have put it in practice so far as possible. But our hands are held; we have not been helped by the powers that be. To do this properly requires more industrial teachers and a far larger

ratio of nurses and attendants. We must have enough to do the absolutely necessary work of nursing, watching, supervising, and then others to do the things spoken of. The greater our efforts put forth in these directions the vastly better will be the results obtained.

Whatever the attractions that induce them to come to us, the very ones that we should like to retain in service will leave after a while, yielding to superior attractions elsewhere. It is desirable, even essential, to retain in our service the faithful and efficient ones, first, because of their qualities of faithfulness and efficiency, and second, that they may be a guide and inspiration to the newcomers.

We must try to keep them with us. By frequent talks with nurses and attendants I find certain material requirements that are essential if we wish for long service.

First seems to be the matter of pay. Other things being equal, people generally are attracted by the larger salary, and our nurses are but human. If we wish to keep them we must not allow the promise of larger wages to tempt them elsewhere.

Second, but not far behind, — in fact, almost alongside of pay, — is the daily length of service. Their work is arduous, and, on some of the wards, far from attractive. These are eight-hours-a-day times. Our nurses are entitled to as short hours as any class of employees I am acquainted with. But the taxpayer, or rather the legislator, has in the past said that shorter hours will require more employees, and more employees will require larger appropriations.

Third, living conditions, which should be comfortable and more attractive than the bare necessities if we would keep our helpers. They must have good food, appealingly served, sufficiently varied, so that the day of the week will not indicate the menu; and plenty of time for eating it. Their rooms must be cheerful, and they should be allowed to room alone.

Fourth, social advantages, — the opportunity to meet others of their class and station in life; to get away from the hospital atmosphere when off duty; to live their own lives as others do out of work hours. They should not, with certain restrictions, be tied too closely to the hospital if they are to be contented.

Those with families or with inclinations that way, the men more especially (for with the women we cannot compete with Cupid), should be given the opportunity of maintaining their homes if we would keep them in our service, as do our carpenters, painters, firemen, mechanics, farmers or other employees. Most men look forward to having a home with its comforts, and those hospitals that have homes for their married nurses and attendants believe they work to the hospital's advantage.

We are all striving to obtain our share of the material benefits of life. If we wish, then, to keep desirable employees we must offer them as much and perhaps a little more than they can obtain elsewhere.

To sum up what I have said. Raise the standards of our training schools for nurses and attendants; increase their wages above those of domestics and farmhands; increase the ratio of nurses to patients; shorten the hours of labor; improve living conditions.

All these things spell larger appropriations for maintenance, but results will justify the outlay.

Dr. Kline: — I will ask Dr. French of Medfield to say something of the housing conditions at that institution, as a factor in keeping employees. I suppose at that institution they are somewhat different than at the majority of the institutions.

Dr. Edward French, superintendent of the Medfield State Hospital: — The subject for discussion to-day should be amended and amplified so as to read: "What Measures should be taken to meet the Shortage of Nurses and Attendants in our State Institutions and improve their Quality?"

Looking back over many years of experience I am impressed with the fact that not only is it more difficult to obtain help in the wards during the summer, but that the quality of the people we are obliged to hire has sadly deteriorated.

Perhaps we have not kept abreast with the times and have not paid a wage or found these people in board and lodging equal to what they can get outside. I think there is no question but that we pay a less wage than men and women can get outside. This applies to the average person, and is still more apparent when applied to the attendant or nurse who is more capable than the mass.

Wages have been increased at least twice in this State during the last twenty years, nurses' homes have been built, the variety and quality of the food has been improved, uniforms have been furnished free, club rooms have been established, hours of labor have been lessened, the number of attendants in the wards has been increased; but in spite of all of these improvements the fact remains that we cannot get attendants and nurses enough, and their quality is not what it used to be.

I have been asked to speak particularly on the aspect of housing attendants. In 1902 there had been completed at Medfield two nurses' homes,—one for men and one for women. Both are fine buildings, and the accommodation provided is as good as many summer hotels and better than most boarding houses. As well as I can judge of the effect of this it has made no particular difference in the stability or length of service of attendants and nurses.

In 1908 three cottages were built. Each provides a complete tenement for a married male attendant on the first floor. This tenement consists of kitchen, dining room, living room with open fire, two chambers, bathroom, basement, necessary pantries and closets. The upper story of each cottage has six rooms, four single and two double, providing rooms for eight female attendants in each building. The wife of the male attendant cares for these rooms. Attendants are given an allowance of \$15 a month for board, and are able to live at home in one of these cottages. They are on duty the same number of hours as other attendants, but are given a little longer time off at noon and night in order to go to their homes for their meals. They are furnished the rent, fuel and lights as an equivalent for the wife's care of the nurses' rooms. Each cottage is heated by a hot-air furnace, and the hot-water supply is provided by a tank on the kitchen range. This worked so well that in 1913 three more cottages were built similar to these, so that at present we have six cottages. It has undoubtedly added much to the stability and contentment of the male attendants, for by this arrangement they have home life and families like other laborers.

In order to show that this experiment has been successful I will detail the time of service of the men who live in these

cottages, although some of the men were employed at the hospital before the cottages were built, but I am quite certain that the privilege of living in one of the cottages has retained their services for the hospital, — one man fifteen years; another, nine years; two others, seven years; another, six years; and another, five years. These men all hold responsible positions, and have been advanced from the position of ordinary attendant to charge attendant, and in one case to be an assistant supervisor. The average length of service of the six men housed in these cottages is six and one-half years.

The feeling of the female nurses who occupy the rooms in the second story has undergone considerable change. In the beginning they were not very favorably impressed, and preferred rooming in the nurses' home. This has gradually changed until now there is no objection to these rooms, although, I think, many of the newer attendants still prefer to room in the nurses' home, where there are a larger number of girls to associate with, where there is a piano and a common sitting room, and where the walk to the wards upon which they are employed is shorter. There is, however, no objection to occupying these rooms, and occasionally employees who have been in these cottages for a year or more express their preference for rooming there, saying that it is more homelike and that the nurses' home is more like an institution. There has never, from the first, been any attempt toward regulating the hours of bedtime in these cottages. If we found attendants were staying out later than was compatible with good work upon the wards we warned them. In most cases it has been sufficient. In some cases we have changed their rooms to the nurses' home, where they would be under closer observation.

It is interesting to know that family life in its best aspect prevails in these cottages. Children have been born in every one, and the school in the north end of Medfield will soon receive a considerable accession to the number of its scholars. The families are allowed the privilege of keeping a few hens, and we fertilize and plow up a small tract of land each spring for a kitchen garden. This has proved to be an excellent feature. Besides reducing the high cost of living it has brought about a general rivalry to work these gardens, to see which

one will cultivate the best garden. All these things tend to contentment and to stimulate the attendant to improve in his work and to take more interest in an occupation which is to be permanent and not a mere temporary makeshift as it too often is.

Another feature which is allied to the housing problem, and for which I am most indebted to one of my lady trustees, is the establishment of a recreation or club room for all the employees of the hospital. They have a large room, about 75 feet square, provided with a piano, toilet rooms, tables for games, settees, chairs, etc. At first this club room was free to all, but from lack of adequate supervision it was not as great a success as it has since become. The organization has been entirely changed. It has been put into the hands of the employees. They elect a president, treasurer, committees and all necessary officers without interference on the part of the hospital officials. A small fee of 10 cents a month is charged each member. This money has provided extra reading matter in the shape of more papers and magazines, games, a victrola, with a large number of records, and occasional entertainments where refreshments are served. An entertainment of some sort is provided by the committees about once a month during the winter; during the summer not so often. The club room is open day and night for smoking and reading, and nearly every night there is an impromptu dancing party. At present there are about 300 voluntary members who pay their monthly dues and enjoy its advantages.

In summing up I believe that in order to increase the number and quality of our ward employees we must pay a larger wage to equal in amount, at least, occupations outside of the hospital where an equal amount of time and service is demanded. Even then we shall have to overcome the handicap of a disagreeable, monotonous occupation.

In the housing aspect of this question the nurses' homes have been of some advantage, but it is not enough to hold this class of employees. Cottages and the possibility of establishing homes have in my opinion added more to the stability and interest of this class of employees than anything else I know of.

Dr. Kline:— During the summer a committee of superintendents was appointed to study this problem of the shortage

of nurses, and Dr. Frost of the Boston State Hospital, I believe, was a member of that committee. I have asked Dr. Frost to say something.

Dr. Henry P. Frost, superintendent of the Boston State Hospital: — I do not think it is possible to say anything more on this subject; everything has been said already. Our problem has been presented and the only possible solution stated. The only thing that remains to be done now is to make contact between the problem and the solution, — to go to the Legislature and get enough money to pay better salaries to the nurses and attendants, and to provide them with more attractive living quarters and with facilities for social life.

I believe that standardization of wages for nurses and attendants is necessary, and that it is perfectly feasible and could be put into effect without a great deal of investigation and without delay, whereas if we are obliged to wait for action by a committee on standardization, dealing with all State departments, results cannot be expected very soon. Uniform compensation will, I think, put a stop to attendants moving around from one institution to another, which they do now very frequently. This ought to be discouraged, and with uniform compensation an employee leaving one institution should be employed in another only on recommendation of his former superintendent, giving good and sufficient reason for the change.

As Dr. Houston has said, a number of things have been done toward solving the problem under discussion, and a good deal of progress has been made. We tried to encourage married attendants, but without special houses, such as Dr. French has spoken of. It is a very unprofitable arrangement and a more or less immoral one because there are no opportunities for raising families. It is unprofitable for an institution to employ both a man and his wife as attendants, for if one is desirable the other may not be, and always, if one has to go the other goes, so I would say that we have gotten very little satisfaction from the married attendants even when we have provided them with quarters. I am very much in favor of these "model tenements," and hope to see the plan carried out if possible at our hospital.

We have a long line of street frontage. Our buildings come very close, somewhat too close to the street, and are overlooked by rows of dwellings on the other side, and I think it would be a very desirable thing, for several reasons, to line our side of the street with tenements, and back those up with a line of gardens and suitable fences and shrubbery between the back premises of the employees and the hospital grounds. This would furnish the employees with very nice conditions for family life and would also afford a screen against the public.

Question: — Would you centralize the purchasing?

Dr. Frost: — No, I would not centralize the purchasing.

Mr. Whitman: — I would like to add one word. It is quite evident that if we are to have any of these desirable conditions it can only be by act of the Legislature. There are two ways of getting them — or perhaps of not getting them. One is to have our boards of trustees complacently sit still and hope that the superintendent will be requested to come and ask for them, in which case usually nothing happens. The other way is to have the trustees do a little work on their own account, which most of us are entirely willing to do. We all of us are scattered, but we have representatives and senators. Practically each trustee has a different representative, and if we can do some personal work with each one of these, insisting that the thing should be done, we will have a force of legislators working for the thing, and probably something will be accomplished.

Mr. John B. Tivnan, member, Massachusetts Commission on Mental Diseases: — I believe we have arrived at a summing-up stage of this subject. It has already been summed up very well. I believe all that has been said and would like to add something to it.

As a former trustee I have a fellow feeling for superintendents and trustees. Some people tell me that I have been promoted, but I feel as if I had been bumped up into an unenviable position.

I want to say that I feel that there is another way of attacking the problem, and that must be through some Governor at some time. For many years I have been accompanying the superintendents before the ways and means, public charitable

and other committees, and almost invariably, on approaching these bodies, we have found the same feeling of indifference among them. The chairman might be smoking or talking with the secretary, the others reading over bills, etc.; and then there would come a summons to roll call, and they would all desert you, and you would stay there and the superintendent would stay there, still talking; and it finally would dawn upon you that the matter of appropriations was all prearranged — that it was clearly a matter of party principle to hold down the tax rate, regardless of the needs of the institutions. In every year of my experience that has been the result. They start and figure that the tax must come within a certain amount, and then they use that sum as a basis. All the superintendents and trustees are familiar with this method. Then comes that big slash, and if you ask for \$100,000 for a special appropriation you consider yourself lucky to get \$10,000; and at such times as this it was only when some clever board of trustees or some trustee could play a little game of politics and “put something across” that we would get a water supply or a nurses’ building, or a little something out of the ordinary, — a method which should not be at all necessary in dealing with this very important problem. When I reflect in this manner I reflect on both political parties. It does not matter whether the Democratic or Republican party is in power; they play the game of the State tax just the same, and they slash our requests for appropriations just the same, regardless of the needs of the institutions.

What we need is some big, constructive Governor or ways and means committee, to say, “Here, these institutions are suffering for these things; they want to make the positions more attractive for the attendants and nurses. Now let us settle that one problem and make it the problem of this year — to do something to be proud of.” We should not feel obliged to go before these committees and dicker with this Representative or that Senator. We should make it a problem for the State to do the things that should have been done years ago.

There is no question about the needs of this particular thing at this particular time, and there would be no shortage of

nurses and attendants at this particular time if the positions were more attractive; but in order to make them more attractive it will be necessary to get the money from the Legislature to build these cottages where the attendant finds so much happiness and finds the homelike conditions that every man in the married state is entitled to. I think this is a partial solution of the problem; and we can talk from now until doomsday about this feature and that feature, but they all fall through in the same manner. The thing to do is to get the necessary money to build these cottages or nurses' homes where the employees of the institutions may have the home life and surroundings of persons employed elsewhere. We need to get some ways and means committee big enough to make the citizens stand up and pay for it, even if the tax rate is beyond the ordinary.

Hon. Elmer A. Stevens, member, Commission on Mental Diseases:— I think perhaps I should say a word, for I was for three years chairman of the Senate ways and means committee.

Now my friend, Mr. Tivnan, has touched on a very vital point — not a tender point with me at all, because I would talk to you just as I talked when I was chairman of that committee. The appropriation bill, as you know, has to originate in the House. I was never on the House committee, but was on the Senate committee. I know that the feeling has existed for a great many years that the State tax must be kept down to a certain point, and that has been responsible for a good many of the institutions not receiving proper attention and proper appropriations. It is not fair to the institutions to base their appropriations on any such fallacy as that.

I believe, as Mr. Tivnan does, that you have a problem in these institutions which cannot be dealt with by piecemeal. It must be handled in a large way, and I believe that the Legislature that makes a move to do it will be sustained.

We are here this morning from different parts of the State, some of us with a good many years' experience in handling financial affairs of the State. There is not one citizen in five hundred in this Commonwealth who can tell anything about the wages paid the attendants and nurses in the State institu-

tions, or about the conditions in the institutions. They know nothing about these institutions. Naturally, when that condition prevails, the taxpayers wonder what is done with so much money. I used to have that question asked me all the time: "What does the State do with so much money?" I have said that it was not a wonder to me what the State did with so much money, but a surprise to me that the State did so much with so little money. People do not have any idea of the tremendous problem the institutions of this State are dealing with.

I have been impressed with what Dr. French and Dr. Houston have said with reference to the housing of their employees. You cannot keep attendants and nurses in such an undesirable occupation unless you have something which is going to hold them. We could not keep employees in our bank, or in any business I have ever been connected with, unless we paid them more than they are paid in the institutions. We could not hire a man in a bank to-day, and put him in the most undesirable position, unless we gave him something to look forward to. You do not want your boy, and I do not want my boy, to take a position unless there is something ahead of him. This is especially true of nurses and attendants. If you want to keep them in your employ you must give them living quarters which are homelike. I think, as Dr. Houston said, many of the attendants come to our institutions simply as a last resort. I should think that the women would have to come as a last resort; what else is there to come for? What reason would there be for taking a position in an institution for the insane to-day, other than as a last resort, unless they are offered something more in the way of position, salary or comfort than is offered them to-day?

I was never more surprised in my life than when I learned the average price paid to the attendants and nurses in our institutions. I have always wondered from that day to this how the institutions have secured as many employees as they have. You haven't the population to draw from that you had forty or fifty years ago.

It is the same with institutions as in the manufacturing establishments. I was raised way down in Maine on a large

farm, and I remember that when our girls graduated from school they thought nothing of going to Lewiston or Auburn and taking positions in the cotton factories; it was the thing to do. A great many took positions in the watch factory at Waltham. They used to go to the straw factories in Milford and Upton and other places. Now in my short life, and less, I have seen that condition change there. You do not find any girls from the farms going into the cotton factories. You see two or three nationalities predominating, and the help problem has changed. It is no longer the thing for the American girl to do, or for the New England farm girl to do, — to go to these places to work.

You have the problem, and the only way to meet it is to give these employees a place to live in which is something like home, and to give them a living wage when they start, with something to look forward to in the way of an increase.

Something has been said by Supervisor of Administration Burbank in reference to a central purchasing agency. If he referred to the bill which used to appear before the Legislature every year, and which, I am proud to say, I voted against, which would establish a central purchasing agency in this State to buy for all the institutions, I want to say right here that I am opposed to it. I cannot conceive of anything that would add to your troubles and difficulties more than that, and, as I have said repeatedly on the ways and means committee, and on the floor of both branches of the Legislature, it would result in every institution in this State having what the superintendent did not want, and no superintendent having what he did want. It could not result in anything else. A central purchasing agency, purchasing for all the institutions, means that there must be a great big plant somewhere and a large force to run it, and a storehouse somewhere.

I haven't any sympathy with the central purchasing agency idea at all. I used to be in the retail provision business myself, and I know how to buy goods. If you have a man to buy goods for your institution who does not know how to buy, you need a new buyer. When the time comes that the superintendent of an institution does not know what he wants, then you have struck hard times; and I haven't any sympathy with

this idea that you can run a public business on different principles.

Some people who want a central purchasing agency would do well to consult the department stores, who have buyers for the different departments. Do you suppose that the linen buyer buys the cotton goods, or that the buyer of shoes buys the rugs? I think this proposition of a central purchasing agency is one of the most important matters we have to combat; and I believe with Mr. Whitman that when that bill comes up the trustees should get busy, and if you do, you will kill the bill. Dr. Pollock says it has been killed year after year in Connecticut.

The idea is on, and I know something about what these professional economy and efficiency fellows are. There is a difference between economy and efficiency and *professional economy* and *efficiency*.

The central purchasing agency plan ought to be turned down by every board of trustees in this Commonwealth, for you are just inviting trouble if you accept it.

Dr. John H. Nichols, superintendent of the State Infirmary:— There is just one thing that Dr. Houston said in his paper that I should like to bring out a little more emphatically. He touched on it, I think, a little too lightly; if I am right he did recommend, among other things, that nurses ought to be put on an eight-hour day.

By law, a large proportion of our employees are on a forty-eight hour per week basis. If there is any part of the work that is hard and difficult, and that tires people out and runs them down, it is the work on the wards. I think that, as the institutions are especially designed and intended for the care of the State's unfortunate people, those people who are most active in the direct care of the State's charges, *i.e.*, the nurses, should have more, rather than less, consideration than those in departments which are just adjuncts of the institutions.

I think that it is necessary to put our nurses and attendants on a three-shift basis, and feel quite certain that it would help to solve many of our problems. This is something that for many years I have advocated on different occasions, and in our estimates we have put up to the Legislature the proposi-

tion of a three-shift day in our institution, but it has never gone through. I feel that it would do a great deal to solve this problem of difficulty in securing nurses. We try to run our training schools and keep the standards up to a point where the nurses can pass, without difficulty, the requirements of the State Board of Registration. If we do not have a three-shift basis for the employment of our nurses we must be necessarily covering the twenty-four hours in two shifts.

However much we may say that we are working them for a ten-hour day or a nine-hour day, or some other number of hours a day, the fact is that from the time that they go on duty until they go off duty there must, in all probability, be twelve hours that have elapsed; and until we get on an eight-hour basis we are practically on a twelve-hour basis. After the nurses have been working hard all day, confined in an atmosphere that is not beneficial, where they have worked with sick people, as is the case in the insane hospitals as well as in the general hospital wards, — after twelve hours of work of that sort, if we require our nurses to attend lectures and expect them to study and get high marks in their examinations we are going to be greatly disappointed in the results. If we want to run our training schools up to a high standard of nursing we should give our nurses eight hours of work and four hours, when they are not tired, for study and for lectures and recreation, which the three-shift basis could bring about.

It involves, of course, in all institutions an additional expenditure. I do not know how much of an expenditure. The way the members of the committee put it back to me is: "Doctor, do you realize how much this would cost, if we put all of the institutions on a three-shift basis?" Of course, I do not know how much it would cost; it would probably involve a great expenditure. Still, I think that is the one thing that will help more than anything else towards procuring and keeping suitable nurses for the care of patients in our hospitals.

Dr. Edward Mellus, Newton, Mass.: — Most of my nurses come from the State hospitals and have had some training, and I hear a good many remarks, finding fault with the different hospitals; and one thing that I always hear is that State hospitals furnish poor food for the nurses. That means more,

apparently, to the nurses I see than poor housing or poor beds; and I have watched and I have tried to improve my nurses' table, and I feel that this is the only way I can keep my better class of nurses, — by putting more money into my table and by seeing that the food that is furnished them is palatable and well served, and that conditions are made homelike for them.

Dr. Houston spoke of furnishing better food, but I have not heard the others lay much stress on that point. It seems to me that good food put on the table and served as well as at home means more in keeping the better class of nurses than good pay or good housing.

Mrs. Sarah J. Rand, trustee, Medfield State Hospital: — Much has been said to-day about how to keep the nurses in the State hospitals, but no suggestion has been offered as to where we can secure either nurses or attendants.

This is an ever-present problem. I have been with our supervisor to the State Employment Bureau and to various intelligence offices in her search for attendants. Seldom are young women found who can be persuaded to enter the training school for nurses. Neither are there many who possess the qualities desirable in the nurse. Where shall we look for those we seek?

It occurs to me that among the wards of the State, those children boarded out by the State and now growing into their young womanhood, some might be found who could be stimulated to take up service under the State. There are now in private homes girls who have passed from State care who, were the proposition intelligently presented to them, might be willing to put themselves under the training which our State hospitals give. Certainly it is fitting that those who have been cared for by the State should be awakened to the idea of entering into its service.

In such schools as at Northfield, where most of the pupils after graduation seek employment, there are doubtless some who would enter our hospital training schools.

Even the State prison for women is not an utterly hopeless field to consider. Any young woman for whom the authorities would be willing to vouch might spring to the opportunity of entering upon a new life where she can be thoroughly trained for her work.



FINANCIAL STATISTICS.

TABLE 2. — *Financial Summary for the Year ending Nov. 30, 1916.*

INSTITUTIONS.		RESOURCES Nov. 30, 1916.					
		Inventory.	Unexpended Balance of Special Appropriations.	Unexpended Balance of Maintenance Appropriations reverting to State Treasury.	Accounts Receivable.	Private Funds.	Total Resources.
The insane:—							
Worcester Hospital,	.	\$2,205,521 71	\$15,715 20	\$4,626 33	\$11,504 78	\$8,593 35	\$2,245,961 37
Taunton Hospital,	.	906,539 62	—	1,585 38	8,631 52	—	916,756 52
Northampton Hospital,	.	1,072,628 37	2,312 41	1,585 38	18,715 04	684 50	1,094,341 02
Danvers Hospital,	.	2,203,051 04	79,670 48	2,389 92	6,154 20	—	2,291,265 64
Westborough Hospital,	.	1,013,328 38	14,977 44	821 13	4,325 21	3,943 22	1,037,395 38
Boston Hospital, including Psychopathic Department,	.	2,971,316 46	116,131 60	166 60	9,521 07	—	3,097,135 73
Grafton Hospital,	.	2,086,692 49	17,835 73	1,296 51	1,675 53	—	2,107,500 26
Medfield Hospital,	.	1,727,120 13	5,396 03	—	1,686 34	—	1,734,202 60
Foxborough Hospital,	.	343,705 44	98,484 71	641 76	303 60	—	443,135 51
Gardner Colony,	.	645,464 38	5,466 27	—	231 25	—	651,161 90
Totals,	.	\$15,175,368 02	\$355,989 87	\$11,528 33	\$62,748 54	\$13,221 07	\$15,618,855 83
Miscellaneous:—							
Monson Hospital,	.	\$979,032 67	—	\$2,288 60	\$1,243 41	—	\$982,962 60
School for the Feeble-minded at Waltham,	.	1,036,438 09	20,983 61	187 43	4,450 16	\$55,108 23	1,117,217 52
Wrentham School,	.	945,290 59	78,665 04	7,053 48	136 58	—	1,031,145 69
Totals,	.	\$2,960,811 35	\$100,046 57	\$9,529 51	\$5,830 15	\$55,108 23	\$3,131,325 81
Aggregates,	.	\$18,136,179 87	\$456,036 44	\$21,057 84	\$68,578 69	\$68,329 30	\$18,750,181 64

TABLE 2. — *Financial Summary for the Year ending Nov. 30, 1916* — Continued.

INSTITUTIONS.	Net Decrease in Resources during Year 1916.	EXPENDITURES.		Unexpended Balances of Special Appropriations reverting to State Treasury.	Money remitted to State Treasury from Receipts.	Aggregates.
		Maintenance Appropriations.	Special Appropriations.			
The insane: —						
Worcester Hospital,	\$1,845 39	\$373,335 67	\$8,284 80	—	\$51,510 55	\$2,681,437 78
Taunton Hospital,	3,431 31	350,987 88	—	—	37,135 80	1,308,314 54
Northampton Hospital,	—	221,020 54	1,187 59	—	56,192 47	1,372,750 62
Danvers Hospital,	—	383,191 18	18,129 52	—	69,095 13	2,754,612 47
Westborough Hospital,	26,625 64	358,511 10	4,503 83	\$537 80	75,807 46	1,500,383 21
Boston Hospital, including Psychopathic Department,	—	488,430 66	38,000 16	—	52,496 87	3,614,069 42
Grafton Hospital,	—	401,784 23	73,761 74	4 86	14,999 18	2,598,080 27
Medfield Hospital,	—	410,831 77	22,217 80	—	10,204 51	2,177,456 58
Foxborough Hospital,	—	123,276 24	61,342 00	—	3,638 96	631,392 71
Gardner Colony,	22,228 14	180,360 90	10,958 04	3 84	3,784 09	868,496 91
Totals,	\$54,134 51	\$3,289,259 17	\$236,391 48	\$546 50	\$367,796 02	\$19,566,983 51
Miscellaneous: —						
Monson Hospital,	—	\$250,669 40	\$2,923 25	—	\$18,747 07	\$1,255,392 32
School for the Feeble-minded at Waltham,	\$27,959 54	320,870 52	6,109 87	—	12,963 82	1,485,112 27
Wrentham School,	—	191,932 71	75,335 81	34 86	1,729 89	1,300,178 96
Totals,	\$27,959 54	\$763,472 63	\$84,359 93	\$34 86	\$33,440 78	\$4,040,593 55
Aggregates,	\$82,094 05	\$4,052,731 80	\$320,751 41	\$581 36	\$401,235 80	\$23,607,577 06

TABLE 2. — *Financial Summary for the Year ending Nov. 30, 1916* — Continued.

RESOURCES Nov. 30, 1915.					
INSTITUTIONS.					
	Inventory.	Unexpended Balance of Special Appropriations.	Accounts Receivable.	Private Funds.	Total Resources.
The insane: —					
Worcester Hospital.	\$2,206,572 48	—	\$12,388 01	\$8,504 74	\$2,227,465 23
Taunton Hospital.	911,078 22	—	7,557 26	—	918,605 48
Northampton Hospital.	1,061,088 64	—	17,453 14	681 00	1,079,202 78
Danvers Hospital.	1,876,738 10	—	9,058 65	—	1,886,746 64
Westborough Hospital.	1,038,444 83	\$5,019 07	6,133 51	3,645 11	1,053,242 52
Boston Hospital, including Psychopathic Department.	2,394,536 20	1,184 76	10,250 26	—	2,365,991 22
Grafton Hospital.	1,901,064 83	58,736 67	1,520 85	—	1,961,322 35
Medfield Hospital.	1,703,908 33	19,613 83	1,420 88	—	1,724,943 04
Foxborough Hospital.	342,038 58	47,626 71	148 11	—	389,813 40
Gardner Colony.	667,825 52	4,428 15	98 25	—	672,351 92
Totals.	\$14,663,375 82	\$136,579 19	\$66,898 92	\$12,830 85	\$14,879,684 78
Miscellaneous: —					
Monson Hospital.	\$960,573 56	\$3,321 17	\$1,194 16	—	\$965,088 89
School for the Feeble-minded at Waltham.	1,035,862 34	3,354 48	3,648 05	\$54,495 63	1,127,300 50
Wrentham School.	921,026 12	88,075 71	216 03	—	1,009,317 86
Totals.	\$2,947,462 02	\$94,781 36	\$5,058 24	\$54,495 63	\$3,101,797 25
Aggregates.	\$17,610,837 84	\$231,360 55	\$71,957 16	\$67,326 48	\$17,981,482 03

TABLE 2. — *Financial Summary for the Year ending Nov. 30, 1916* — Concluded.

INSTITUTIONS.	Net Increase in Valuation.	APPROPRIATIONS.		Receipts from All Sources except State Treasurer.	Aggregates.
		Maintenance.	Special.		
The insane:					
Worcester Hospital,	—	\$378,462 00	\$24,000 00	\$51,510 55	\$2,681,437 78
Taunton Hospital,	—	352,573 26	—	37,135 80	1,308,314 54
Northampton Hospital,	\$12,825 13	221,030 24	3,500 00	56,182 47	1,372,750 62
Danvers Hospital,	322,458 40	335,581 10	97,800 00	92,026 13	2,764,612 47
Westborough Hospital,	—	356,332 23	15,000 00	75,807 46	1,500,332 21
Boston Hospital, including Psychopathic Department,	16,001 07	488,617 26	150,983 00	52,496 87	3,674,089 42
Grafton Hospital,	185,782 34	403,080 74	32,865 66	14,999 18	2,598,080 27
Medfield Hospital,	23,477 26	410,831 77 ¹	8,000 00	10,204 51	2,177,456 58
Foxborough Hospital,	1,822 35	123,918 00	112,200 00	3,638 96	631,392 71
Gardner Colony,	—	180,360 90 ²	12,000 00	3,784 09	868,496 91
Totals,	\$562,366 55	\$3,300,787 50	\$456,348 66	\$307,796 02	\$19,566,983 51
Miscellaneous: —					
Monson Hospital,	\$18,508 86	\$252,958 00	—	\$18,747 07	\$1,255,302 32
School for the Feeble-minded at Waltham,	—	321,067 95	\$23,700 00	12,963 82	1,485,112 27
Wrentham School,	24,185 02	198,986 19	65,960 00	1,729 89	1,300,178 96
Totals,	\$42,693 38	\$773,002 14	\$89,660 00	\$33,440 78	\$4,040,593 55
Aggregates,	\$605,059 93	\$4,073,789 64	\$546,008 66	\$401,236 80	\$23,607,577 06

¹ Includes deficiency of \$14,511.23.² Includes deficiency of \$2,305.90.

TABLE 3. — *Inventory of State Institutions, Nov. 30, 1916.*

	REAL ESTATE.									
	LAND.									
	WOODLAND.				MOWING.		TILLAGE.			
	Acres.	Value.	Acres.	Value.	Acres.	Value.	Acres.	Value.	Acres.	Value.
The insane:—										
Worcester Hospital,	137	\$247,440 00	182	\$13,560 00	84	\$90,372 44	111	\$73,127 56		
Taunton Hospital,	26	6,500 00	50	10,000 00	92	13,800 00	70	10,500 00		
Northampton Hospital,	23	4,861 20	93	19,655 55	110	23,248 00	100	21,135 00		
Danvers Hospital,	26	30,000 00	40	1,600 00	176	26,000 00	79	11,250 00		
Westborough Hospital,	50	10,000 00	103	9,646 50	43	647 00	247	22,228 00		
Boston Hospital, including Psychopathic Department,	59	279,936 59	7	3,080 00	110	452,094 90	57	231,622 98		
Grafton Hospital,	15	232,547 35	570	14,820 00	78	3,120 00	98	3,920 00		
Medfield Hospital,	75	40,000 00	283	6,126 39	54	1,312 20	131	4,250 80		
Foxborough Hospital,	21	6,220 00	20	4,100 00	3	700 00	38	7,750 00		
Gardner Colony,	32	1,657 89	805	16,438 98	120	4,150 38	132	8,632 89		
Totals,	464	\$859,163 03	2,243	\$99,027 42	870	\$615,445 42	1,063	\$397,437 23		
Miscellaneous:—										
Monson Hospital,	80	\$5,475 00	287	\$5,773 00	152	\$14,544 00	51	\$5,126 00		
School for the Feeble-minded at Waltham,	68	16,953 00	1,428	28,143 00	287	25,806 00	—	—		
Wrentham School,	60	9,000 00	185	11,100 00	39	3,900 00	71	7,100 00		
Totals,	208	\$31,428 00	1,900	\$45,016 00	478	\$44,250 00	122	\$12,226 00		
Totals, hospitals and miscellaneous,	672	\$890,591 03	4,143	\$144,043 42	1,348	\$659,695 42	1,185	\$409,663 23		

TABLE 3. — *Inventory of State Institutions, Nov. 30, 1916* — Continued.

INSTITUTIONS.	REAL ESTATE — CON.					
	LAND — CON.					
	PASTURE.		MISCELLANEOUS.		TOTALS.	
	Acres.	Value.	Acres.	Value.	Acres.	Value.
The insane: —						
Worcester Hospital,	64	\$2,580 00	—	—	578	\$427,080 00
Taunton Hospital,	95	11,875 00	—	—	333	52,675 00
Norhampton Hospital,	185	30,095 75	—	—	511	108,000 00
Danvers Hospital,	188	4,750 00	—	—	509	73,600 00
Westborough Hospital,	194	5,832 60	36	\$1,589 90	763	49,944 00
Boston Hospital, including Psychopathic Department,	—	—	2	11,994 81	235	981,729 28
Grafton Hospital,	162	3,728 23	—	—	923	258,133 58
Medfield Hospital,	67	2,400 00	—	—	610	54,089 39
Foxborough Hospital,	21	3,260 00	—	—	103	22,030 00
Gardner Colony,	636	6,430 50	50	250 00	1,775	37,580 64
Totals,	1,612	\$79,954 08	88	\$13,834 71	6,340	\$2,094,861 89
Miscellaneous: —						
Monson Hospital,	81	\$2,534 00	10	\$450 00	661	\$33,902 00
School for the Feeble-minded at Waltham,	209	2,510 00	—	—	1,992	73,412 00
Wrentham School,	140	7,000 00	—	—	495	35,100 00
Totals,	430	\$12,044 00	10	\$450 00	3,148	\$145,414 00
Totals, hospitals and miscellaneous,	2,042	\$91,998 08	98	\$14,284 71	9,488	\$2,210,275 89

TABLE 3. — *Inventory of State Institutions, Nov. 30, 1916* — Continued.

INSTITUTIONS.	REAL ESTATE — Con.				
	BUILDINGS.				
	Patients.	Nurses.	Farm, Stable and Grounds.	Miscellaneous.	Totals.
The insane: —					
Worcester Hospital,	\$1,187,452 00	\$100,268 79	\$70,667 28	\$1,500 00	\$1,359,888 07
Taunton Hospital,	409,124 72	69,040 00	54,490 00	79,040 00	611,694 72
Northampton Hospital,	468,464 25	—	42,800 00	78,967 00	590,231 25
Danvers Hospital,	1,715,700 00	11,900 00	34,700 00	65,300 00	1,827,600 00
Westborough Hospital,	504,925 00	45,050 00	20,285 00	47,281 00	616,841 00
Boston Hospital, including Psychopathic Department,	1,322,933 93	31,933 79	12,867 96	140,776 05	1,517,514 73
Grafton Hospital,	983,202 00	106,885 00	14,200 00	222,600 00	1,326,887 00
Medford Hospital,	734,438 12	138,452 53	65,387 00	432,365 89	1,370,843 54
Foxborough Hospital,	116,745 34	20,250 00	7,063 96	35,328 43	179,387 73
Gardner Colony,	232,793 28	14,120 44	36,758 13	63,657 93	347,329 78
Totals,	\$7,675,078 64	\$537,903 55	\$359,419 33	\$1,175,316 30	\$9,748,217 82
Miscellaneous: —					
Monson Hospital,	\$408,431 25	\$34,758 75	\$30,603 75	\$70,162 50	\$543,956 25
School for the Feeble-minded at Waltham,	423,032 25	62,250 00	22,646 00	104,839 50	612,767 75
Wrentham School,	409,700 00	58,850 00	18,100 00	92,500 00	579,150 00
Totals,	\$1,241,163 50	\$155,858 75	\$71,349 75	\$267,502 00	\$1,735,874 00
Totals, hospitals and miscellaneous,	\$8,916,242 14	\$693,762 30	\$430,769 08	\$1,443,318 30	\$11,484,091 82

TABLE 3. — *Inventory of State Institutions, Nov. 30, 1916* — Continued.

REAL ESTATE — CON.						Aggregates.
INSTITUTIONS.	BETTERMENTS.					
	Water System and Ap-purtenances.	Drainage System and Ap-purtenances.	Heating and Lighting System and Ap-purtenances.	Miscellaneous.	Totals.	
The insane: —						
Worcester Hospital,	\$93,960 97	—	\$114,097 05	\$28,571 14	\$236,629 16	\$2,023,597 23
Taunton Hospital,	41,205 31	\$17,848 31	50,393 32	758 98	110,115 92	774,485 64
Norhampton Hospital,	23,407 15	21,350 00	30,523 62	161,776 36	237,057 13	935,288 38
Danvers Hospital,	27,455 16	—	82,771 45	—	110,226 61	2,011,426 61
Westborough Hospital,	92,325 81	28,119 33	79,013 66	4,215 23	203,674 03	870,459 03
Boston Hospital, including Psychopathic Department,	—	—	—	330,992 02	330,992 02	2,830,235 03
Grafton Hospital,	59,506 10	53,334 07	37,383 45	202,796 21	353,019 83	1,938,040 41
Medfield Hospital,	55,000 00	14,000 00	59,030 00	13,850 00	141,880 00	1,566,812 93
Foxborough Hospital,	7,435 89	9,062 97	—	68,190 66	84,689 52	286,107 25
Gardner Colony,	35,290 98	25,935 42	116,520 54	2,402 92	180,149 86	565,060 28
Totals,	\$435,587 37	\$169,650 10	\$569,643 09	\$813,553 52	\$1,988,431 08	\$13,501,513 79
Miscellaneous: —						
Monson Hospital,	\$26,196 41	\$26,303 27	\$14,391 40	\$175,879 19	\$242,770 27	\$820,628 52
School for the Feeble-minded at Waltham,	—	—	—	217,851 81	217,851 81	904,031 56
Wrentham School,	23,086 00	52,231 50	150,350 00	—	225,670 50	\$42,920 50
Totals,	\$49,282 41	\$78,537 77	\$164,741 40	\$393,731 00	\$686,292 58	\$2,567,580 58
Totals, hospitals and miscellaneous,	\$484,869 78	\$248,187 87	\$734,384 49	\$1,207,284 52	\$2,674,726 66	\$16,369,091 37

TABLE 3. — *Inventory of State Institutions, Nov. 30, 1916* — Continued.

INSTITUTIONS.	PERSONAL PROPERTY.					
	PROVISIONS AND GROCERIES.		CLOTHING AND CLOTHING MATERIALS.		FURNISHINGS.	
	Amount.	Increase.	Amount.	Increase.	Amount.	Increase.
The insane: —						
Worcester Hospital,	\$5,064 45	\$3,760 23 ¹	\$10,977 29	\$474 99 ¹	\$79,949 00	\$1,727 51 ¹
Taunton Hospital,	6,582 52	1,657 83 ¹	9,063 38	364 07	64,295 14	5,321 14 ¹
Northampton Hospital,	9,790 79	2,744 39	5,744 26	598 58 ¹	53,250 49	5,338 09
Danvers Hospital,	15,404 61	3,054 43	7,918 60	1,638 67 ¹	79,063 53	6,987 12
Westborough Hospital,	10,577 54	5,013 59 ¹	5,262 12	2,154 96 ¹	71,705 37	1,868 49 ¹
Boston Hospital, including Psychopathic Department,	6,420 24	3,131 74 ¹	11,802 25	92 48 ¹	73,246 83	1,495 75 ¹
Griffith Hospital,	3,873 55	1,705 72 ¹	16,850 76	3,124 84 ¹	65,064 52	2,737 86
Medfield Hospital,	6,495 19	4,918 85 ¹	12,902 42	20,738 82 ¹	58,200 46	1,555 81 ¹
Foxborough Hospital,	4,884 55	1,316 28	3,662 47	386 94 ¹	21,461 37	2,545 82
Gardner Colony,	5,046 16	2,993 77 ¹	9,911 06	578 99 ¹	33,123 90	1,480 49 ¹
Totals,	\$74,139 40	\$16,120 63 ¹	\$93,744 61	\$29,405 20 ¹	\$501,960 34	\$4,209 30
Miscellaneous: —						
Monson Hospital,	\$4,049 21	\$171 57	\$5,883 46	\$4,883 53 ¹	\$79,503 11	\$8,756 37
School for the Feeble-minded at Waltham,	6,010 04	5,922 27 ¹	1,611 67	12,419 17 ¹	68,109 71	5,890 97 ¹
Wrentham School,	6,402 98	3,068 60	11,288 71	4,269 80	46,815 45	6,513 06
Totals,	\$17,063 13	\$2,682 20 ¹	\$18,783 84	\$13,032 84 ¹	\$193,428 27	\$9,578 46
Totals, hospitals and miscellaneous,	\$91,202 53	\$18,811 83 ¹	\$112,528 45	\$42,438 04 ¹	\$795,388 61	\$13,787 76

¹ Decrease.

TABLE 3. — *Inventory of State Institutions, Nov. 30, 1916* — Continued.

INSTITUTIONS.	PERSONAL PROPERTY — CON.							
	HEAT, LIGHT AND POWER.		REPAIRS AND IMPROVEMENTS.		FARM, STABLE AND GROUNDS.		INDUSTRIES.	
	Amount.	Increase.	Amount.	Increase.	Amount.	Increase.	Amount.	Increase.
The insane: —								
Worcester Hospital,	\$8,704 20	\$1,341 54 ¹	\$3,622 70	\$587 69 ¹	\$57,211 17	\$18,461 73	—	\$2,251 46 ¹
Taunton Hospital,	1,763 60	1,754 16	7,707 39	5,133 27	32,209 28	420 45	\$2,307 21	316 35 ¹
Northampton Hospital,	6,787 50	905 35	10,204 66	4,871 22	48,239 24	1,876 31	—	108 20 ¹
Danvers Hospital,	6,960 65	2,235 57	20,254 73	885 23	41,712 31	1,477 09 ¹	6,803 68	2,068 33 ¹
Westborough Hospital,	3,290 55	1,703 75	12,232 05	2,089 32 ¹	32,325 53	5,977 04 ¹	477 66	1,274 27 ¹
Boston Hospital, including Psychopathic Department,	125 62	2,738 38 ¹	6,579 01	419 70	14,741 64	393 62 ¹	3,429 02	336 18
Grafton Hospital,	6,182 67	7,391 52 ¹	19,719 25	6,557 06	30,144 63	292 17 ¹	2,635 21	486 53
Medfield Hospital,	14,574 80	10,887 33	4,376 05	655 30 ¹	53,842 43	1,267 92 ¹	3,523 16	1,119 06
Foxborough Hospital,	2,821 74	1,633 00 ¹	3,355 98	147 71	12,722 04	126 86 ¹	1,019 97	575 66
Gardner Colony,	681 78	3,281 79 ¹	6,878 78	431 35	13,480 00	16,833 20 ¹	6,097 98	496 97
Totals,	\$51,893 11	\$1,120 98	\$94,970 60	\$15,113 24	\$335,628 30	\$9,352 03 ¹	\$26,793 89	\$1,132 50
Miscellaneous: —								
Monson Hospital,	\$20,670 61	\$1,866 83	\$6,735 17	\$1,198 69	\$29,424 52	\$1,853 42 ¹	\$1,561 77	\$424 27 ¹
School for the Feeble-minded at Waltham,	9,429 77	3,905 06 ¹	4,298 73	93 40	32,305 25	2,260 12 ¹	3,375 69	573 61
Wrentham School,	5,554 15	192 65 ¹	2,438 41	1,255 71	18,709 72	2,925 44 ¹	1,935 80	735 87 ¹
Totals,	\$35,654 53	\$2,230 88 ¹	\$13,472 31	\$2,547 80	\$80,439 50	\$218 10 ¹	\$9,874 26	\$587 53 ¹
Totals, hospitals and miscellaneous,	\$87,547 64	\$1,109 90 ¹	\$108,442 91	\$17,661 04	\$417,067 80	\$9,580 13 ¹	\$33,668 15	\$504 97

¹ Decrease.

TABLE 3. — *Inventory of State Institutions, Nov. 30, 1916* — Continued.

INSTITUTIONS.	REAL AND PERSONAL PROPERTY.					
	TRAVEL, TRANSPORTATION AND OFFICE EXPENSES.		MEDICAL AND GENERAL CARE.		TOTAL VALUATION OF PERSONAL PROPERTY.	
	Amount.	Increase.	Amount.	Increase. ¹	Amount.	Increase.
The insane:—						
Worcester Hospital,	\$684 36	—	\$15,711 31	\$860 23 ²	\$181,924 48	\$7,438 08
Taunton Hospital,	3,947 41	—	3,738 05	969 83 ²	132,053 98	503 20 ²
Northampton Hospital,	683 63	—	2,639 42	107 64 ²	137,339 99	11,258 92
Danvers Hospital,	8,412 75	—	8,793 54	3,763 21	191,624 43	15,869 23
Westborough Hospital,	2,016 70	—	4,981 63	5,070 56 ²	142,869 35	21,784 48 ²
Boston Hospital, including Psychopathic Department,	4,097 11	—	14,839 18	4,027 55 ²	141,080 43	11,096 64 ²
Grafton Hospital,	1,390 55	—	2,781 14	2,022 56 ²	148,652 08	4,815 31 ²
Medfield Hospital,	1,431 37	—	4,961 32	1,043 06	160,307 20	16,088 20 ²
Foxborough Hospital,	2,941 03	—	4,689 04	2,038 18	57,598 19	4,516 85
Gardner Colony,	2,244 49	—	2,939 95	722 58	80,404 10	23,497 33 ²
Totals,	\$27,849 40	—	\$65,874 58	\$5,491 24 ²	\$1,373,854 23	\$38,792 08 ²
Miscellaneous:—						
Monson Hospital,	\$2,019 43	—	\$7,956 87	\$1,303 44	\$158,404 15	\$6,105 68
School for the Feeble-minded at Waltham,	1,112 33	—	9,202 43	2,961 97	132,456 53	25,508 61 ²
Wrentham School,	2,306 93	—	4,826 94	859 08 ²	102,370 09	16,243 97
Totals,	\$5,528 69	—	\$21,986 24	\$3,406 33	\$393,230 77	\$3,218 96 ²
Totals, hospitals and miscellaneous,	\$33,378 09	—	\$87,860 82	\$2,084 91 ²	\$1,767,085 00	\$42,011 04 ²
Totals, hospitals and miscellaneous,					\$2,567,580 58	\$16,568 29
Totals, hospitals and miscellaneous,					\$16,369,094 37	\$567,352 57

¹ Includes travel, transportation and office expenses and medical and general care, which take place of miscellaneous column, 1915.² Decrease.

TABLE 3. — *Inventory of State Institutions, Nov. 30, 1916* — Concluded.

INSTITUTIONS.	REAL AND PERSONAL PROPERTY — Con.					
	TOTAL, REAL AND PERSONAL.		PRIVATE FUNDS.		TOTAL INVENTORY.	
	Amount.	Increase.	Amount.	Increase.	Amount.	Increase.
The insane: —						
Worcester Hospital,	\$2,205,521 71	\$1,050 77 ¹	\$8,593 35	\$88 61	\$2,214,115 06	\$982 16 ¹
Taunton Hospital,	906,539 62	4,538 60 ¹	—	—	906,539 62	4,538 60 ¹
Northampton Hospital,	1,072,628 37	11,559 73	684 50	3 50	1,073,312 87	11,563 23
Danvers Hospital,	2,203,051 04	326,262 85	—	—	2,203,051 04	326,262 85
Westborough Hospital,	1,013,328 38	25,116 45 ¹	3,943 22	298 11	1,017,271 60	24,818 34 ¹
Boston Hospital, including Psychopathic Department,	2,971,316 46	16,730 26	—	—	2,971,316 46	16,730 26
Grafton Hospital,	2,086,092 49	185,027 66	—	—	2,086,092 49	185,027 66
Medfield Hospital,	1,727,120 13	23,211 80	—	—	1,727,120 13	23,211 80
Foxborough Hospital,	343,705 44	1,666 86	—	—	343,705 44	1,666 86
Gardner Colony,	645,464 38	22,361 14 ¹	—	—	645,464 38	22,361 14 ¹
Totals,	\$15,175,368 02	\$511,992 20	\$13,221 07	\$390 22	\$15,188,589 09	\$512,382 42
Miscellaneous: —						
Monson Hospital,	\$879,032 67	\$18,459 11	—	—	\$879,032 67	\$18,459 11
School for the Feeble-minded at Waltham,	1,035,488 09	29,374 25 ¹	\$55,108 23	\$612 60	1,091,596 32	28,761 65 ¹
Wrentham School,	945,290 59	24,264 47	—	—	945,290 59	24,264 47
Totals,	\$2,960,811 35	\$13,349 33	\$55,108 23	\$612 60	\$3,015,919 58	\$13,961 93
Totals, hospitals and miscellaneous,	\$18,136,179 37	\$525,341 53	\$68,329 30	\$1,002 82	\$18,204,508 67	\$526,344 35

¹ Decrease.

TABLE 4. — Receipts of State Institutions during the Fiscal Year ending Nov. 30, 1916 (available for Maintenance the Following Year under Section 2, Chapter 175, Acts of 1905).

INSTITUTIONS.	RECEIPTS FOR SUPPORT.				RECEIPTS ON ACCOUNT OF SALES OR REFUNDS.				
	Private.	Reimbursing.	Cities and Towns.	Total Support.	Salaries, Wages and Labor.	Travel, Transportation and Office.	Food.	Clothing and Materials.	
The insane: —									
Worcester Hospital,	\$32,686 89	\$16,959 73	—	\$49,646 62	—	—	\$288 75	\$429 56	
Taunton Hospital,	20,290 98	14,479 01	—	34,769 99	—	—	18 05	493 56	
Northampton Hospital,	36,624 75	17,368 06	—	54,010 81	—	\$20 48	313 78	210 02	
Danvers Hospital,	35,694 33	23,498 66	—	59,192 99	—	201 06	27 89	353 05	
Westborough Hospital,	57,697 13	15,850 33	—	73,547 46	—	1 73	350 95	123 40	
Boston Hospital, including Psychopathic Department,	25,455 45	19,893 36	—	45,348 81	—	—	1,020 94	161 75	
Grafton Hospital,	1,344 21	11,227 73	—	12,571 94	—	31 00	—	516 83	
Medfield Hospital,	360 87	7,776 02	—	8,136 89	—	11 33	91 19	121 28	
Foxborough Hospital,	721 40	2,593 03	—	3,314 43	—	—	6 32	23 26	
Gardner Colony,	—	2,793 92	—	2,793 92	—	7 95	13 19	81 68	
Totals,	\$210,876 01	\$132,457 85	—	\$343,333 86	—	\$273 55	\$2,130 76	\$2,514 89	
Miscellaneous: —									
Monson Hospital,	\$9,230 53	\$3,951 47	—	\$13,182 00	—	—	\$406 68	\$140 02	
School for the Feeble-minded at Waltham,	8,559 05	1,298 43	—	9,857 48	—	\$69 99	200 25	416 90	
Wrentham School,	471 42	589 53	—	1,061 00	—	35 00	1 65	21 24	
Totals,	\$18,261 00	\$5,839 48	—	\$24,100 48	—	\$104 99	\$608 88	\$564 16	
Totals, hospitals and miscellaneous,	\$229,137 01	\$138,297 33	—	\$367,434 34	—	\$378 54	\$2,739 34	\$3,098 55	
Mental Wards, State Infirmary,	—	\$394 16	—	\$394 16	—	—	\$4 77	\$447 90	
Bridgewater Hospital,	—	2,226 32	—	2,226 32	—	—	9 70	387 84	
Totals,	—	\$2,620 48	—	\$2,620 48	—	—	\$14 47	\$835 74	
Aggregates,	\$229,137 01	\$140,917 81	—	\$370,054 82	—	\$378 54	\$2,753 81	\$3,934 29	

TABLE 4. — *Receipts of State Institutions during the Fiscal Year ending Nov. 30, 1916, etc. — Concluded.*

INSTITUTIONS.	RECEIPTS ON ACCOUNT OF SALES OR REFUNDS — Con.						Miscellaneous.	Total Institution Receipts.	Sales on Account of Industries Fund.
	Furnishings.	Medical and General Care.	Heat, Light and Power.	Farm, Stable and Grounds.	Repairs.	Total Sales or Refunds.			
The insane: —									
Worcester Hospital,	\$148 95	\$10 50	—	\$361 81	\$20 74	\$1,260 31	\$603 62	\$51,510 55	\$216 40
Taunton Hospital,	32 34	4 23	—	727 77	—	1,275 95	1,089 86	37,135 89	683 07
Northampton Hospital,	261 69	—	\$21 09	493 28	108 75	1,429 09	752 57	56,192 47	—
Danvers Hospital,	69 61	238 95	80	712 51	701 69	2,305 26	527 88	62,026 13	1,468 02
Westborough Hospital,	85 58	148 52	—	303 53	461 66	1,475 37	784 63	75,807 46	331 37
Boston Hospital, including Psychopathic Department,	181 15	—	975 00	3,768 35	381 70	6,488 89	659 17	52,496 87	283 45
Grafton Hospital,	29 06	166 96	—	270 37	998 32	2,012 54	414 70	14,999 18	300 71
Medford Hospital,	192 50	—	16 85	1,143 25	58 80	1,635 20	432 42	10,204 51	—
Foxborough Hospital,	26 10	—	33 81	43 64	—	133 13	191 40	3,638 96	—
Gardner Colony,	—	10	15 13	423 30	33 27	574 62	415 55	3,784 09	986 12
Totals,	\$1,026 98	\$569 26	\$1,062 68	\$8,247 81	\$2,764 93	\$18,590 36	\$5,871 80	\$397,796 02	\$4,772 14
Miscellaneous: —									
Monson Hospital,	\$14 73	\$35 61	—	\$1,949 06	\$2,000 10	\$4,552 20	\$1,012 87	\$18,747 07	\$87 50
School for the Feeble-minded at Waltham,	311 99	26 02	\$17 25	1,657 01	—	2,699 41	406 98	12,963 82	—
Wrentham School,	—	10 00	13 80	451 07	—	532 76	133 13	1,729 89	—
Totals,	\$326 72	\$71 63	\$31 05	\$4,057 14	\$2,000 10	\$7,784 37	\$1,555 93	\$33,440 78	\$87 50
Totals, hospitals and miscellaneous,	\$1,353 70	\$640 89	\$1,093 73	\$12,304 95	\$4,765 03	\$26,374 73	\$7,427 73	\$401,235 80	\$4,859 64
Mental Wards, State Infirmary,	—	\$95 14	—	\$54 03	\$7 71	\$609 55	\$196 02	\$1,199 73	—
Bridgewater Hospital,	\$18 59	—	—	1,839 66	157 70	2,413 49	324 26	4,964 07	\$2,164 84
Totals,	\$18 59	\$95 14	—	\$1,893 69	\$165 41	\$3,023 04	\$520 28	\$6,163 80	\$2,164 84
Aggregates,	\$1,372 29	\$736 03	\$1,093 73	\$14,198 64	\$4,930 44	\$29,397 77	\$7,948 01	\$407,400 60	\$7,024 48

TABLE 5. — *Expenses for Maintenance and Net Weekly Per Capitas for the Fiscal Year ending Nov. 30, 1916.*

INSTITUTIONS.	SALARIES AND WAGES.				RELIGIOUS INSTRUCTION.				
	Average Number of Patients.	Gross Expenses.	Receipts.	Net Expenses.	Net Weekly Per Capita, 1916.	Gross Expenses.	Receipts.	Net Expenses.	Net Weekly Per Capita, 1916.
The insane: —									
Worcester Hospital,	1,508	\$148,297 16	—	\$148,297 16	\$1,8912	\$1,055 00	—	\$1,055 00	\$0.0134
Taunton Hospital,	1,342	131,334 47	—	131,334 47	1,8820	1,803 39	—	1,803 39	.0258
Northampton Hospital,	978	86,454 61	—	86,454 61	1,7000	1,215 07	—	1,215 07	.0239
Danvers Hospital,	1,529	149,017 02	—	149,017 02	1,8742	945 00	—	945 00	.0119
Westborough Hospital,	1,329	134,069 31	—	134,069 31	2,2294	1,340 96	—	1,340 96	.0223
Boston Hospital, excluding Psychopathic Department,	1,527	156,643 16	—	156,643 16	1,9727	1,404 00	—	1,404 00	.0177
Boston Hospital, including Psychopathic Department,	1,621	221,567 89	—	221,567 89	2,6286	1,464 00	—	1,464 00	.0174
Grafton Hospital,	1,686	153,334 17	—	153,334 17	1,7490	1,373 80	—	1,373 80	.0157
Medfield Hospital,	1,640	169,602 06	—	169,602 06	1,9887	1,528 00	—	1,528 00	.0179
Foxborough Hospital,	333	54,876 67	—	54,876 67	3,1691	1,342 00	—	1,342 00	.0775
Gardner Colony,	785	70,100 56	—	70,100 56	1,7173	995 00	—	995 00	.0244
Totals and averages,	12,751	\$1,338,653 92	—	\$1,338,653 92	\$2.0189	\$13,262 22	—	\$13,262 22	\$0.0200
Miscellaneous: —									
Monson Hospital,	1,001	\$110,484 10	—	\$110,484 10	\$2.1226	\$1,577 92	—	\$1,577 92	\$0.0203
School for the Feeble-minded at Waltham,	1,601	129,781 69	—	129,781 69	1,5589	2,055 00	—	2,055 00	.0247
Wrentham School,	998	68,003 88	—	68,003 88	1,3104	1,183 16	—	1,183 16	.0228
Totals and averages,	3,600	\$308,269 67	—	\$308,269 67	\$1.6467	\$4,816 08	—	\$4,816 08	\$0.0257
Totals and averages, hospitals and miscellaneous,	16,351	\$1,646,923 59	—	\$1,646,923 59	\$1.9370	\$18,078 30	—	\$18,078 30	\$0.0213
Mental Wards, State Infirmary,	705	\$54,118 00	—	\$54,118 00	\$1.4762	\$564 86	—	\$564 86	\$0.0154
Bridgewater Hospital,	832	35,879 33	—	35,879 33	.8293	596 79	—	596 79	.0138
Totals and averages,	1,537	\$89,997 33	—	\$89,997 33	\$1.1260	\$1,161 65	—	\$1,161 65	\$0.0145
Aggregates,	17,888	\$1,736,920 92	—	\$1,736,920 92	\$1.8673	\$19,239 95	—	\$19,239 95	\$0.0207

TABLE 5. — *Expenses for Maintenance, etc. — Continued.*

INSTITUTIONS.	TRAVEL, TRANSPORTATION AND OFFICE EXPENSES.				FOOD.			
	Gross Expenses.	Receipts.	Net Expenses.	Net Weekly Per Capita, 1916.	Gross Expenses.	Receipts.	Net Expenses.	Weekly Per Capita, 1916.
The insane: —								
Worcester Hospital,	\$8,358 88	—	\$8,358 88	\$0.1066	\$99,992 59	\$288 75	\$99,703 84	\$1.2715
Taunton Hospital,	8,302 87	—	8,302 87	.1190	81,533 27	18 05	81,515 22	1.1681
Northampton Hospital,	2,554 95	\$20 48	2,534 47	.0498	60,247 69	313 78	59,933 91	1.1785
Danvers Hospital,	10,636 79	201 06	10,435 73	.1312	87,955 54	27 59	87,927 95	1.1059
Westborough Hospital,	6,862 53	1 73	6,860 80	.0993	80,705 50	350 95	80,354 55	1.1627
Boston Hospital, excluding Psychopathic Department,	5,402 46	—	5,402 46	.0680	112,755 56	917 82	111,837 74	1.4085
Boston Hospital, including Psychopathic Department,	9,559 76	31 00	9,559 76	.1134	136,393 89	1,020 94	135,372 95	1.6059
Grafton Hospital,	10,232 06	11 33	10,201 06	.1163	102,527 63	—	102,527 63	1.1694
Medfield Hospital,	4,077 15	11 33	4,065 82	.0477	106,526 66	91 19	106,435 47	1.2481
Foxborough Hospital,	5,086 61	—	5,086 61	.2938	23,917 11	6 32	23,910 79	1.3808
Gardner Colony,	4,532 90	7 95	4,524 95	.1109	29,514 60	13 19	29,501 41	.7227
Totals and averages,	\$70,204 50	\$273 55	\$69,930 95	\$0.1055	\$809,314 48	\$2,130 76	\$807,183 72	\$1.2174
Miscellaneous: —								
Monson Hospital,	\$5,428 11	—	\$5,428 11	\$0.1043	\$62,660 66	\$406 68	\$62,253 98	\$1.1960
School for the Feeble-minded at Waltham,	6,082 83	\$69 99	6,012 84	.0722	74,537 42	200 25	74,037 17	.8893
Wrentham School,	4,661 17	35 00	4,626 17	.0892	48,739 21	1 65	48,737 56	.9391
Totals and averages,	\$16,172 11	\$104 99	\$16,067 12	\$0.0858	\$185,637 29	\$608 58	\$185,028 71	\$0.9881
Totals and averages, hospitals and miscellaneous,	\$86,376 61	\$378 54	\$85,998 07	\$0.1011	\$994,951 77	\$2,739 34	\$992,212 43	\$1.1670
Mental Wards, State Infirmary,	\$2,625 63	—	\$2,625 63	\$0.0716	\$52,909 24	\$4 77	\$52,904 47	\$1.4431
Bridgewater Hospital,	1,633 81	—	1,633 81	.0378	36,718 51	9 70	36,708 81	.8485
Totals and averages,	\$4,259 44	—	\$4,259 44	\$0.0533	\$89,627 75	\$14 47	\$89,613 28	\$1.1213
Aggregates,	\$90,636 05	\$378 54	\$89,257 51	\$0.0970	\$1,054,579 52	\$2,753 81	\$1,051,825 71	\$1.1630

TABLE 5. — *Expenses for Maintenance, etc.* — Continued.

INSTITUTIONS.	CLOTHING AND CLOTHING MATERIALS.				FURNISHINGS AND HOUSEHOLD SUPPLIES.			
	Gross Expenses.	Receipts.	Net Expenses.	Weekly Per Capita, 1916.	Gross Expenses.	Receipts.	Net Expenses.	Weekly Per Capita, 1916.
The insane: —								
Worcester Hospital,	\$6,394 26	\$429 56	\$5,964 70	\$0.0761	\$22,517 44	\$148 95	\$22,368 49	\$0.2852
Taunton Hospital,	11,752 04	493 56	11,258 48	.1613	17,175 85	32 34	17,143 51	.2457
Northampton Hospital,	5,760 82	210 02	5,550 80	.1091	8,527 80	261 69	8,266 11	.1625
Danvers Hospital,	7,689 77	353 05	7,336 72	.0923	17,982 84	69 61	17,923 23	.2254
Westborough Hospital,	7,320 61	123 40	7,337 21	.1070	13,835 89	85 58	13,750 31	.1990
Boston Hospital, excluding Psychopathic Department,	10,860 65	161 75	10,698 90	.1348	18,094 61	181 15	17,913 46	.2256
Boston Hospital, including Psychopathic Department,	11,443 87	161 75	11,282 12	.1338	21,929 01	181 15	21,747 86	.2580
Grafton Hospital,	11,044 63	516 83	10,527 80	.1201	31,692 98	29 06	31,663 92	.3612
Medfield Hospital,	18,268 65	121 28	18,147 37	.2128	16,912 13	192 50	16,719 63	.1961
Foxborough Hospital,	2,379 34	23 26	2,356 08	.1361	5,675 31	26 10	5,649 21	.3262
Gardner Colony,	8,755 97	81 68	8,674 29	.2125	7,706 93	—	7,706 93	.1888
Totals and averages,	\$91,009 96	\$2,514 39	\$88,495 57	\$0.1335	\$163,966 18	\$1,026 98	\$162,939 20	\$0.2457
Miscellaneous: —								
Monson Hospital,	\$6,340 10	\$146 02	\$6,194 08	\$0.1190	\$11,424 94	\$14 73	\$11,410 21	\$0.2192
School for the Feeble-minded at Waltham,	16,352 79	416 90	15,935 89	.1914	16,656 18	311 99	16,344 19	.1963
Wrentham School,	16,446 53	21 24	16,425 29	.3165	7,629 80	—	7,629 80	.1470
Totals and averages,	\$39,139 42	\$584 16	\$38,555 26	\$0.2060	\$35,710 92	\$326 72	\$35,384 20	\$0.1890
Totals and averages, hospitals and miscellaneous,	\$130,149 38	\$3,098 55	\$127,050 83	\$0.1494	\$199,677 10	\$1,353 70	\$198,323 40	\$0.2333
Mental Wards, State Infirmary,	\$9,139 93	\$447 90	\$8,692 03	\$0.2371	\$8,136 14	—	\$8,136 14	\$0.2219
Bridgewater Hospital,	8,779 23	387 84	8,391 39	.1940	3,710 15	\$18 59	3,691 56	.0853
Totals and averages,	\$17,919 16	\$835 74	\$17,083 42	\$0.2138	\$11,846 29	\$18 59	\$11,827 70	\$0.1480
Aggregates,	\$148,068 54	\$3,934 29	\$144,134 25	\$0.1550	\$211,523 39	\$1,372 29	\$210,151 10	\$0.2259

TABLE 5. — *Expenses for Maintenance, etc. — Continued.*

INSTITUTIONS.	MEDICAL AND GENERAL CARE.				HEAT, LIGHT AND POWER.			
	Gross Expenses.	Receipts.	Net Expenses.	Weekly Per Capita, 1916.	Gross Expenses.	Receipts.	Net Expenses.	Weekly Per Capita, 1916.
The insane: —								
Worcester Hospital,	\$21,355 04	\$10 50	\$21,384 54	\$0.2727	\$33,472 75	—	\$33,472 75	\$0.4269
Taunton Hospital,	22,502 51	4 23	22,498 28	.3224	31,320 84	—	31,320 84	.4488
Northampton Hospital,	11,428 91	—	11,428 91	.2247	18,828 70	\$21 09	18,807 61	.3698
Danvers Hospital,	19,771 06	238 95	19,532 11	.2457	32,352 86	80	32,352 06	.4069
Westborough Hospital,	17,567 99	148 52	17,419 47	.2521	41,954 21	—	41,954 21	.6071
Boston Hospital, excluding Psychopathic Department,	14,280 02	—	14,280 02	.1798	34,052 74	975 00	33,977 74	.4166
Boston Hospital, including Psychopathic Department,	20,054 66	—	20,054 66	.2379	42,949 42	975 00	41,974 42	.4930
Grafton Hospital,	14,937 20	166 96	14,770 24	.1685	38,314 26	—	38,314 26	.4370
Medfield Hospital,	11,932 85	—	11,932 85	.1399	44,747 65	16 85	44,730 80	.5245
Foxborough Hospital,	7,107 55	—	7,107 55	.4105	11,303 09	33 81	11,269 28	.6508
Gardner Colony,	9,503 30	10	9,503 20	.2328	14,270 94	15 13	14,255 81	.3492
Totals and averages,	\$156,201 07	\$569 26	\$155,631 81	\$0.2347	\$309,514 72	\$1,062 63	\$308,452 04	\$0.4652
Miscellaneous: —								
Monson Hospital,	\$9,261 65	\$35 61	\$9,226 04	\$0.1772	\$21,173 58	—	\$21,173 58	\$0.4068
School for the Feeble-minded at Waltham,	10,643 86	26 02	10,617 84	.1273	18,567 97	\$17 25	18,550 72	.2228
Wrentham School,	5,154 06	10 00	5,144 06	.0991	14,149 71	13 80	14,135 91	.2724
Totals and averages,	\$25,059 57	\$71 63	\$24,987 94	\$0.1335	\$53,891 26	\$31 05	\$53,860 21	\$0.2877
Totals and averages, hospitals and miscellaneous,	\$181,260 64	\$640 89	\$180,619 75	\$0.2124	\$363,405 98	\$1,093 73	\$362,312 25	\$0.4261
Mental Wards, State Infirmary,	\$6,273 31	\$95 14	\$6,178 17	\$0.1685	\$7,429 02	—	\$7,429 02	\$0.2027
Bridgewater Hospital,	5,259 84	—	5,259 84	.1216	11,817 84	—	11,817 84	.2732
Totals and averages,	\$11,533 15	\$95 14	\$11,438 01	\$0.1431	\$19,246 86	—	\$19,246 86	\$0.2408
Aggregates,	\$192,793 79	\$736 03	\$192,057 76	\$0.2065	\$382,652 84	\$1,093 73	\$381,559 11	\$0.4102

TABLE 5. — *Expenses for Maintenance, etc. — Continued.*

INSTITUTIONS.	HEAT, LIGHT AND POWER — CON.						TOTAL CONSUMPTION, WEEKLY PER CAPITA.	
	COAL.							
	SOFT.		HARD.		BUCKWHEAT AND SCREENINGS.		Quantity, Long Tons.	Cost, 1916.
	Quantity, Long Tons.	Average Price.	Quantity, Long Tons.	Average Price.	Quantity, Long Tons.	Average Price.		
The insane: —								
Worcester Hospital,	5,947	\$4 86	410	\$7 61	—	—	.0870	\$0.4358
Taunton Hospital,	4,487	5 07	951	7 40	—	—	.0715	.3900
Northampton Hospital,	3,453	4 84	215	4 91	—	—	.0680	.3287
Danvers Hospital,	6,329	4 36	250	6 53	—	—	.0832	.3698
Westborough Hospital,	7,655	4 91	504	6 55	—	—	.1124	.5641
Boston Hospital, excluding Psychopathic Department,	6,632	4 75	281	7 21	—	—	—	—
Boston Hospital, including Psychopathic Department,	8,238	4 80	306	7 12	—	—	.1069	.5253
Grafton Hospital,	2,810	6 06	235	7 43	5,003	\$4 41	.1113	.5208
Medfield Hospital,	8,385	4 43	693	6 80	—	—	.1053	.4751
Foxborough Hospital,	2,134	4 42	149	6 99	—	—	.1581	.7349
Gardner Colony,	1,979	4 15	452	6 41	—	—	.0594	.2782
Totals and averages,	51,917	\$4 69	4,165	\$6 90	5,003	\$4 41	.0944	\$0.4540
Miscellaneous: —								
Monson Hospital,	3,064	\$4 24	583	\$8 17	—	—	.0944	\$0.4745
School for the Feeble-minded at Waltham,	2,732	4 67	637	7 25	—	—	.0503	.2634
Wrentham School,	2,207	5 45	240	7 97	—	—	.0616	.3389
Totals and averages,	8,003	\$4 72	1,460	\$7 74	—	—	.0657	\$0.3323
Totals and averages, hospitals and miscellaneous,	59,920	\$4 69	5,625	\$7 12	5,003	\$4 41	.0880	\$0.4296
Mental Wards, State Infirmary,	—	—	—	—	—	—	—	—
Bridgewater Hospital,	—	—	—	—	—	—	—	—
Totals and averages,	—	—	—	—	—	—	—	—
Aggregates,	—	—	—	—	—	—	—	—

TABLE 5. — *Expenses for Maintenance, etc. — Continued.*

INSTITUTIONS.	FARM, STABLE AND GROUNDS.				REPAIRS AND IMPROVEMENTS.			
	Gross Expenses.	Receipts.	Net Expenses.	Weekly Per Capita, 1916.	Gross Expenses.	Receipts.	Net Expenses.	Weekly Per Capita, 1916.
The insane:—								
Worcester Hospital,	\$18,661 29	\$361 81	\$18,299 48	\$0.2324	\$13,691 26	\$20 74	\$13,670 52	\$0.1743
Taunton Hospital,	24,745 01	727 77	24,017 24	.3442	20,517 63		20,517 63	.2040
Northampton Hospital,	17,670 24	493 28	17,176 96	.3378	8,340 75	103 75	8,232 00	.1619
Danvers Hospital,	24,461 82	712 51	23,749 31	.2987	32,363 48	701 69	31,666 79	.3983
Westborough Hospital,	20,236 98	303 53	19,933 45	.2884	11,217 12	461 66	10,755 46	.1556
Boston Hospital, excluding Psychopathic Department,	7,183 77	3,768 35	3,415 42	.0430	13,307 96	381 70	12,926 26	.1628
Boston Hospital, including Psychopathic Department,	7,254 63	3,768 35	3,486 28	.0414	15,833 63	381 70	15,451 93	.1833
Grafton Hospital,	20,282 88	270 37	20,012 51	.2283	18,044 62	998 32	17,046 30	.1944
Medfield Hospital,	25,554 09	1,143 25	24,410 84	.2862	11,682 53	58 80	11,623 73	.1363
Foxborough Hospital,	7,112 52	43 64	7,068 88	.4082	4,476 04		4,476 04	.2585
Gardner Colony,	23,689 00	423 30	23,265 70	.5700	11,291 70	33 27	11,258 43	.2758
Totals and averages,	\$189,668 46	\$8,247 81	\$181,420 65	\$0.2736	\$147,463 66	\$2,764 93	\$144,698 73	\$0.2182
Miscellaneous:—								
Monson Hospital,	\$12,723 53	\$1,949 06	\$10,774 47	\$0.2069	\$9,594 81	\$2,000 10	\$7,594 71	\$0.1459
School for the Feeble-minded at Waltham,	34,327 04	1,657 01	32,670 03	.3924	12,165 74	—	12,165 74	.1462
Wrentham School,	17,166 65	451 07	16,715 58	.3221	8,798 54	—	8,798 54	.1695
Totals and averages,	\$64,217 22	\$4,057 14	\$60,160 08	\$0.3214	\$30,559 09	\$2,000 10	\$28,558 99	\$0.1526
Totals and averages, hospitals and miscellaneous,	\$253,885 68	\$12,304 95	\$241,580 73	\$0.2841	\$178,022 75	\$4,765 03	\$173,257 72	\$0.2038
Mental Wards, State Infirmary,	\$5,998 20	\$54 03	\$5,944 17	\$0.1621	\$9,497 20	\$7 71	\$9,489 49	\$0.2589
Bridgewater Hospital,	9,335 71	1,339 66	7,996 05	.1746	3,120 29	157 70	2,962 59	.0685
Totals and averages,	\$15,393 91	\$1,393 69	\$13,990 22	\$0.1689	\$12,617 49	\$165 41	\$12,452 08	\$0.1558
Aggregates,	\$269,279 59	\$14,198 64	\$255,080 95	\$0.2742	\$190,640 24	\$4,930 44	\$185,709 80	\$0.1997

TABLE 5. — *Expenses for Maintenance, etc.* — Continued.

INSTITUTIONS.	TOTAL MAINTENANCE EXPENSES.				
	Gross Expenses.	GROSS WEEKLY PER CAPITA.		Receipts from Sales or Refunds.	Net Expenses.
		1916.	Three Years' Average.		
The insane:—					
Worcester Hospital,	\$373,835 67	\$4.7673	\$4.8688	\$1,260 31	\$4.7513
Taunton Hospital,	350,887 88	5.0296	4.6701	1,275 95	5.0113
Northampton Hospital,	221,029 54	4.3461	4.1143	1,429 09	4.3180
Danvers Hospital,	383,191 18	4.8195	4.6721	2,305 26	4.7905
Westborough Hospital,	355,511 10	5.1442	5.0941	3,574 37	5.1229
Boston Hospital, excluding Psychopathic Department,	373,984 93	4.7099	4.8007	6,385 77	4.6295
Boston Hospital, including Psychopathic Department,	488,450 66	5.7947	5.9319	6,488 89	5.7177
Grafton Hospital,	401,784 23	4.5828	4.5207	2,012 54	4.5599
Medfield Hospital,	410,831 77	4.8174	4.3287	1,635 20	4.7982
Foxborough Hospital,	123,276 24	7.1192	6.4364	133 13	7.1115
Gardner Colony,	180,360 90	4.4184	4.1821	574 62	4.4044
Totals and averages,	\$3,289,259 17	\$4.9608	\$4.7523 ¹	\$18,590 36	\$4.9327
Miscellaneous:—					
Monson Hospital,	\$250,669 40	\$4.8157	\$4.7992	\$4,552 20	\$4.7282
School for the Feeble-minded at Waltham,	320,370 52	3.8542	3.8061	2,699 41	3.8217
Wrentham School,	191,932 71	3.6984	4.0778	532 76	3.6881
Totals and averages,	\$763,472 63	\$4.0784	\$4.3722 ²	\$7,784 37	\$4.0363
Totals and averages, hospitals and miscellaneous,	\$4,052,731 80	\$4.7665	\$4.6655	\$26,374 73	\$4.7355
Mental Wards, State Infirmary,	\$156,691 53	\$4.2742	—	\$609 55	\$4.2575
Bridgewater Hospital,	116,911 50	2.7023	—	2,413 49	2.6465
Totals and averages,	\$273,603 03	\$3.4233	—	\$3,023 04	\$3.3855
Aggregates,	\$4,326,334 83	\$4.6511	—	\$29,397 77	\$4.6195

¹ Foxborough not included.² Foxborough included.

TABLE 5.—*Expenses for Maintenance, etc.*—Concluded.

INSTITUTIONS.	MAINTENANCE APPROPRIATION.			Deficiencies.	Balance re- verting to State Treasury.
	Receipts of 1915.	In Addition to Such Receipts.	Totals.		
The insane:—					
Worcester Hospital,	\$53,170 47	\$225,291 53	\$278,462 00	—	\$4,626 33
Taunton Hospital,	39,310 80	313,262 49 ¹	352,573 26	—	1,355 38
Northampton Hospital,	52,907 87	168,122 37 ²	221,030 24	—	70
Danvers Hospital,	63,973 95	321,607 15	385,581 10	—	2,389 92
Westborough Hospital,	74,283 65	282,048 58 ³	356,332 23	—	821 13
Boston Hospital, excluding Psychopathic Department, Grafton Hospital,	43,822 82	—	—	—	—
Boston Hospital, including Psychopathic Department, Grafton Hospital,	13,796 31	444,794 44 ⁴	458,590 75	—	166 60
Medford Hospital,	13,390 68	389,284 43 ⁵	402,675 11	—	1,296 51
Foxborough Hospital,	2,543 23	382,929 86 ⁶	385,473 09	\$14,511 23	—
Gardner Colony,	2,537 80	121,374 77	123,912 57	—	641 76
Totals and averages,	\$359,737 58	175,517 20	535,254 78	2,305 90	—
Miscellaneous:—					
Monson Hospital,	\$14,922 67	\$238,035 33	\$252,958 00	—	\$2,288 60
School for the Feeble-minded at Waltham,	14,759 07	306,298 88 ⁷	321,057 95	—	187 43
Wrentham School,	2,520 58	196,465 61 ⁸	198,986 19	—	7,033 48
Totals and averages,	\$32,202 32	\$740,799 82	\$773,002 14	—	\$9,529 51
Totals and averages, hospitals and miscellaneous,	\$391,939 90	\$3,665,032 61	\$4,056,972 51	\$16,817 13	\$21,057 84
Mental Wards, State Infirmary,	\$1,231 94	\$155,832 51	\$157,064 45	—	\$372 92
Bridgewater Hospital,	3,383 14	113,536 85	116,919 99	—	7 99
Totals and averages,	\$4,615 08	\$269,368 86	\$273,983 94	—	\$380 91
Aggregates,	\$396,554 98	\$3,934,407 47	\$4,330,962 45	\$16,817 13	\$21,438 75

¹ Includes \$298.30 brought over from 1915.² Includes \$45.54 brought over from 1915.³ Includes \$137.06 brought over from 1915 and \$820.89 from sewage.⁴ Includes \$130.47 brought over from 1915.⁵ Includes \$73.26 brought over from 1915.⁶ Includes \$258.24 brought over from 1915 and from small items.⁷ Includes \$1,232.23 brought over from 1915.⁸ Includes \$126.26 brought over from 1915.

TABLE 6. — *Whole Weekly Per Capita Cost of Support of a Patient in the Institutions for the Insane, Feeble-minded, Epileptic and Inebriate for the Fiscal Year ending Nov. 30, 1916.*

INSTITUTIONS.	Average Number of Patients, 1916.	Total Real and Personal Property.	Per Capita Valuation.	WEEKLY PER CAPITA COST.						
				Interest 3.54 Per Cent.	Deprecia- tion.	Maintenance, exclusive of Repairs and Im- provements.	Gross Cost.	Receipts.	Net Cost.	
The insane: —										
Worcester Hospital,	1,508	\$2,205,521 71	\$1,462 55	\$1 00	\$0 44	\$4 33	\$5 77	\$0 66		\$5 11
Taunton Hospital,	1,342	906,539 62	675 51	46	44	4 59	5 49	53		4 96
Northampton Hospital,	1,978	1,072,628 37	1,096 76	75	33	4 04	5 12	1 15		3 97
Danvers Hospital,	1,529	2,203,051 04	1,440 84	98	70	4 12	5 80	78		5 02
Westborough Hospital,	1,329	1,013,328 38	762 47	52	28	4 86	5 66	1 10		4 56
Boston Hospital, including Psychopathic De- partment,	1,621	2,971,316 46	1,833 01	1 24	30	5 50	7 04	62		6 42
Grafton Hospital,	1,686	2,036,692 49	1,237 66	84	39	4 20	5 43	17		5 26
Medfield Hospital,	1,640	1,727,120 13	1,053 12	72	27	4 55	5 54	12		5 42
Foxborough Hospital,	333	343,705 44	1,032 15	70	67	6 45	7 82	21		7 61
Gardner Colony,	785	645,464 38	822 27	56	44	3 99	4 99	09		4 90
Totals and averages,	12,751	\$15,175,368 02	\$1,190 13	\$0 81	\$0 40	\$4 56	\$5 77	\$0 55		\$5 22
Miscellaneous: —										
Monson Hospital,	1,001	\$979,032 67	\$978 05	\$0 67	\$0 29	\$4 52	\$5 48	\$0 36		\$5 12
School for the Feeble-minded at Waltham,	1,601	1,036,438 09	647 40	44	29	3 57	4 30	16		4 14
Wrentham School,	998	945,290 59	947 18	64	28	3 42	4 34	03		4 31
Totals and averages,	3,600	\$2,960,811 35	\$822 45	\$0 56	\$0 29	\$3 79	\$4 64	\$0 18		\$4 46
Totals and averages, hospitals and miscel- laneous,	16,351	\$18,136,179 37	\$1,109 12	\$0 76	\$0 38	\$4 39	\$5 53	\$0 47		\$5 06

TABLE 7. — *Receipts and Expenses on Account of Institutions for the Insane, Feeble-minded, Epileptic and Inebriate for the Fiscal Year ending Nov. 30, 1916.*

	EXPENSES.				Total Receipts.	Net Expenses.
	Increase- ing Value of Plant.	Which counterbalance Depreciation.	Maintenance, exclusive of Repairs and Im- provements.	Total Expenses.		
State Board of Insanity: —						
Office, traveling and contingent expenses, salaries and printing						
annual report,	—	—	\$65,955 34	\$65,955 34	\$333 30 ¹	\$65,692 04
Transportation and deportation of patients, etc.,	—	—	7,319 29	7,319 29	147 18	7,172 11
Pathological investigation,	—	—	5,003 25	5,003 25	3 25	5,000 00
Totals,	—	—	\$78,277 88	\$78,277 88	\$483 73	\$77,794 15
The insane: —						
Worcester Hospital,	\$8,284 80	\$34,137 31	\$339,656 37	\$382,078 48	\$51,510 55	\$330,567 93
Taunton Hospital,	—	30,613 02	320,335 78	350,948 80	37,135 80	313,813 00
Northampton Hospital,	—	16,533 21	204,496 33	221,029 54	56,192 47	164,837 07
Danvers Hospital,	18,129 52	55,274 91	327,916 27	401,320 70	62,026 13	339,294 57
Westborough Hospital,	4,431 27	19,552 02	325,777 53	349,810 82	75,807 46	274,003 36
Boston Hospital, including Psychopathic Department,	36,006 16	95,113 21	463,337 45	524,456 82	52,496 87	471,959 95
Grafton Hospital,	73,761 74	33,807 16	367,977 07	475,545 97	14,999 18	460,546 79
Medfield Hospital,	22,217 80	22,923 21	387,903 56	433,049 57	10,204 51	422,845 06
Foxborough Hospital,	61,342 00	11,651 45	111,624 79	184,618 24	3,638 96	180,979 28
Gardner Colony,	10,958 04	17,895 57	162,465 33	191,318 94	3,784 09	187,534 85
Totals,	\$235,181 33	\$267,501 07	\$3,011,495 48	\$3,514,177 88	\$367,796 02	\$3,146,381 86

¹ Includes bank interest and licenses for private hospitals.

TABLE 7. — *Receipts and Expenses, etc.* — Concluded.

	EXPENSES.				Total Receipts.	Net Expenses.
	Increase- ing Value of Plant.	Which counterbalance Depreciation.	Maintenance, exclusive of Repairs and Im- provements.	Total Expenses.		
Miscellaneous: —						
Mental Wards, State Infirmary,	—	\$15,362 48	\$496,718 79	\$512,081 27	\$1,199 73	\$510,881 54
Bridgewater,	—	4,591 67	381,131 96	385,723 63	4,964 07	380,759 56
Monson Hospital (insane),	\$984 15	5,087 69	79,303 51	85,375 35	6,311 45	79,063 90
Totals,	\$984 15	\$25,041 84	\$957,154 26	\$983,180 25	\$12,475 25	\$970,705 00
Totals, institutions for the insane,	\$236,165 48	\$292,542 91	\$3,908,649 74	\$4,497,358 13	\$380,271 27	\$4,117,086 86
Family care,	—	—	10,255 99	10,255 99	770 34	9,485 65
Totals for the insane,	\$236,165 48	\$292,542 91	\$3,978,905 73	\$4,507,614 12	\$381,041 61	\$4,126,572 51
Feeble-minded: —						
School for the Feeble-minded at Waltham,	\$6,100 87	\$23,772 64	\$297,097 88	\$326,971 39	\$12,963 82	\$314,007 57
Wrentham School,	73,335 81	14,523 74	177,408 97	265,268 52	1,729 89	265,538 63
Totals for the feeble-minded,	\$81,436 68	\$38,296 38	\$474,506 85	\$594,239 91	\$14,693 71	\$579,546 20
Epileptic: —						
Monson Hospital (sane),	\$1,939 10	\$10,024 42	\$156,253 78	\$168,217 30	\$12,435 62	\$155,781 68
Hospital Cottages for Children,	—	—	9,176 65	9,176 65	—	9,176 65
Totals for epileptics,	\$1,939 10	\$10,024 42	\$165,430 43	\$177,393 95	\$12,435 62	\$164,958 33
Inebriates: —						
Insane institutions,	—	—	\$10,262 62	\$10,262 62	—	\$10,262 62
Aggregates,	\$319,541 26	\$340,863 71	\$4,707,383 51	\$5,367,788 48	\$408,654 97	\$4,959,133 51

TABLE 8. — *General Statement as to Special Appropriations.*

INSTITUTIONS.	Balances brought forward from Previous Years.	New Appropriations.	Total of Live Appropriations.	Land.	EXPENDED DURING FISCAL YEAR ENDING NOV. 30, 1916.			
					FOR CONSTRUCTION.			
					BUILDINGS FOR PATIENTS.		BUILDINGS FOR NURSES.	
					New and Additions.	Repairs.	New and Additions.	Repairs.
The insane:—								
Worcester Hospital,	—	\$24,000 00	\$24,000 00	—	\$8,241 52	—	—	—
Taunton Hospital,	—	—	—	—	—	—	—	—
Northampton Hospital,	—	3,500 00	3,500 00	—	—	—	—	—
Danvers Hospital,	—	97,800 00	97,800 00	—	—	—	\$12,967 52	—
Westborough Hospital,	\$5,019 07	15,000 00	20,019 07	—	—	\$22 56	—	—
Boston Hospital, including Psychopathic Department,	1,154 76	150,983 00	152,137 76	—	30,852 65	—	—	—
Grafton Hospital,	58,736 67	32,865 66 ¹	91,602 33	—	45,552 75	—	—	—
Medfield Hospital,	19,613 83	8,000 00	27,613 83	—	—	—	—	—
Foxborough Hospital,	47,626 71	112,200 00	159,826 71	\$6,739 77	55,382 86	—	—	—
Gardner Colony,	4,428 15	12,000 00	16,428 15	611 50	3,238 66	—	3,319 86	—
Proposed Metropolitan Hospital,	44,399 84	—	44,399 84	—	44,225 27	—	—	—
Totals,	\$180,979 03	\$456,348 66	\$637,327 69	\$7,351 27	\$187,493 71	\$22 56	\$16,287 38	—
Miscellaneous:—								
Monson Hospital,	\$3,321 17	—	\$3,321 17	—	—	—	—	—
School for the Feeble-minded at Waltham,	3,384 48	\$23,700 00	27,084 48	—	\$1,391 18	—	—	—
Wrentham School,	88,075 71	65,960 00	154,035 71	—	47,644 67	—	\$6,705 20	—
Proposed School for Feeble-minded,	50,000 00	150,000 00	200,000 00	\$48,903 76	—	—	—	—
Totals,	\$144,781 36	\$239,660 00	\$384,441 36	\$48,903 76	\$49,035 85	—	\$6,705 20	—
Totals, hospitals and miscellaneous,	\$325,760 39	\$696,008 66	\$1,021,769 05	\$56,255 03	\$236,529 56	\$22 56	\$22,992 58	—
Mental Wards, State Infirmary,	—	—	—	—	—	—	—	—
Bridgewater Hospital,	—	—	—	—	—	—	—	—
Totals,	—	—	—	—	—	—	—	—
Aggregates,	\$325,760 39	\$696,008 66	\$1,021,769 05	\$56,255 03	\$236,529 56	\$22 56	\$22,992 58	—

¹ Includes \$165.66 for transfer.

TABLE 8. — *General Statement as to Special Appropriations* — Continued.

EXPENDED DURING FISCAL YEAR ENDING NOV. 30, 1916 — Con.										
INSTITUTIONS.	For Construction — Con.						For Furnishing and Equipping.			
	BUILDINGS FOR FARM, STABLE AND GROUNDS.		ALL OTHER BUILDINGS.		TOTAL BUILDINGS.		FOR PATIENTS.		First Fur- nishing and Equipping.	Repairs and Renewals.
	New and Additions.	Repairs.	New and Additions.	Repairs.	New and Additions.	Repairs.				
The insane: —										
Worcester Hospital,	—	—	—	—	\$8,241 52	—	—	—	—	—
Taunton Hospital,	—	—	—	—	—	—	—	—	—	\$1,187 59
Northampton Hospital,	—	—	—	—	—	—	—	—	—	—
Danvers Hospital,	—	—	\$5,162 00	—	18,129 52	—	—	—	—	—
Westborough Hospital,	—	—	—	—	—	\$22 56	—	—	—	—
Boston Hospital, including Psychopathic De- partment,	\$1,622 96	—	—	—	32,475 61	—	—	—	—	—
Grafton Hospital,	—	—	—	—	45,552 75	—	—	—	—	—
Medfield Hospital,	—	—	13,360 49	—	13,360 49	—	—	\$6,201 47	—	—
Foxborough Hospital,	—	—	—	—	58,702 72	—	—	—	—	—
Gardner Colony,	180 50	—	—	—	3,419 16	—	—	—	—	—
Proposed Metropolitan Hospital,	—	—	—	—	44,225 27	—	—	—	—	—
Totals,	\$1,803 46	—	\$18,522 49	—	\$224,107 04	\$22 56	—	\$6,201 47	\$1,187 59	—
Miscellaneous: —										
Monson Hospital,	—	—	—	—	—	—	—	—	—	—
School for the Feeble-minded at Waltham,	\$1,387 42	—	\$3,322 27	—	\$6,100 87	—	—	—	—	—
Wrentham School,	4,848 24	—	479 87	—	59,677 98	—	—	\$4,637 18	—	—
Proposed School for Feeble-minded,	—	—	—	—	—	—	—	—	—	—
Totals,	\$6,235 66	—	\$3,802 14	—	\$65,778 85	—	—	\$4,637 18	—	—
Totals, hospitals and miscellaneous,	\$8,039 12	—	\$22,324 63	—	\$289,885 89	\$22 56	—	\$10,838 65	\$1,187 59	—
Mental Wards, State Infirmary,	—	—	—	—	—	—	—	—	—	—
Bridgewater Hospital,	—	—	—	—	—	—	—	—	—	—
Totals,	—	—	—	—	—	—	—	—	—	—
Aggregates,	\$8,039 12	—	\$22,324 63	—	\$289,885 89	\$22 56	—	\$10,838 65	\$1,187 59	—

TABLE 8. — *General Statement as to Special Appropriations* — Continued.

EXPENDED DURING FISCAL YEAR ENDING NOV. 30, 1916 — CON.						
INSTITUTIONS.	FOR FURNISHING AND EQUIPPING — CON.					
	FOR NURSES.		FOR FARM, STABLE AND GROUNDS.		FOR ALL OTHER PURPOSES.	
	First Furnishing and Equipping.	Repairs and Renewals.	First Furnishing and Equipping.	Repairs and Renewals.	First Furnishing and Equipping.	Repairs and Renewals.
The insane:—						
Worcester Hospital,	—	—	—	—	—	—
Taunton Hospital,	—	—	—	—	—	—
Northampton Hospital,	—	—	—	—	—	—
Danvers Hospital,	—	—	—	—	—	—
Westborough Hospital,	—	—	—	—	—	—
Boston Hospital, including Psychopathic Department,	—	—	—	—	—	—
Grafton Hospital,	—	—	—	—	\$2,734 40	—
Medfield Hospital,	—	—	—	—	2,117 54	—
Foxborough Hospital,	—	—	—	—	—	—
Gardner Colony,	—	—	—	—	—	—
Proposed Metropolitan Hospital,	—	—	—	—	—	—
Totals,	—	—	—	—	\$4,851 94	—
Miscellaneous:—						
Monson Hospital,	—	—	—	—	—	—
School for the Feeble-minded at Waltham,	—	—	—	—	—	—
Wrentham School,	\$1,002 20	—	\$23 00	—	\$4,082 65	—
Proposed School for Feeble-minded,	—	—	—	—	—	—
Totals,	\$1,002 20	—	\$23 00	—	\$4,082 65	—
Totals, hospitals and miscellaneous,	\$1,002 20	—	\$23 00	—	\$8,934 59	—
Mental Wards, State Infirmary,	—	—	—	—	—	—
Bridgewater Hospital,	—	—	—	—	—	—
Totals,	—	—	—	—	—	—
Aggregates,	\$1,002 20	—	\$23 00	—	\$8,934 59	—

TABLE 8. — *General Statement as to Special Appropriations* — Continued.

INSTITUTIONS.		EXPENDED DURING FISCAL YEAR ENDING NOV. 30, 1916 — Con.									
		FOR FURNISHING AND EQUIPPING — Con.		FOR BETTERMENTS.							
		TOTALS.		WATER SUPPLY, EXCLUSIVE OF PLUMBING IN BUILDINGS.		SEWERAGE, EXCLUSIVE OF PLUMBING IN BUILDINGS.		HEATING, EXCLUSIVE OF APPURTENANCES IN BUILDINGS.			
		First Furnishing and Equipping.	Repairs and Renewals.	Adding to Original Value.	Repairs and Renewals.	Adding to Original Value.	Repairs and Renewals.	Adding to Original Value.	Repairs and Renewals.	Adding to Original Value.	Repairs and Renewals.
The insane: —											
Worcester Hospital,	.	—	—	—	—	\$43 28	—	—	—	—	—
Taunton Hospital,	.	—	\$1,187 59	—	—	—	—	—	—	—	—
Northampton Hospital,	.	—	—	—	—	—	—	—	—	—	—
Danvers Hospital,	.	—	—	—	—	—	—	—	—	—	—
Westborough Hospital,	.	—	—	—	—	—	—	—	—	—	—
Boston Hospital, including Psychopathic Department,	.	—	—	—	—	—	—	—	—	—	—
Grafton Hospital,	.	\$8,935 87	—	—	—	2,174 00	—	—	—	847 70	—
Medfield Hospital,	.	2,117 54	—	\$3,938 35	—	469 07	—	—	—	12,324 20	—
Foxborough Hospital,	.	—	—	—	—	—	—	—	—	—	—
Gardner Colony,	.	—	—	811 72	—	3,632 31	—	—	—	2,483 35	—
Proposed Metropolitan Hospital,	.	—	—	—	—	—	—	—	—	—	—
Totals,	.	\$11,053 41	\$1,187 59	\$4,750 07	—	\$6,318 66	—	\$20,136 52	—	—	—
Miscellaneous: —											
Monson Hospital,	.	—	—	\$2,923 25	—	—	—	—	—	—	—
School for the Feeble-minded at Waltham,	.	—	—	—	—	—	—	—	—	—	—
Wrentham School,	.	\$9,835 03	—	—	—	—	—	\$5,822 80	—	—	—
Proposed School for Feeble-minded,	.	—	—	—	—	—	—	—	—	—	—
Totals,	.	\$9,835 03	—	\$2,923 25	—	\$6,318 66	—	\$5,822 80	—	—	—
Totals, hospitals and miscellaneous,	.	\$20,888 44	\$1,187 59	\$7,673 32	—	—	—	\$25,959 32	—	—	—
Mental Wards, State Infirmary,	.	—	—	—	—	—	—	—	—	—	—
Bridgewater Hospital,	.	—	—	—	—	—	—	—	—	—	—
Totals, Aggregates,	.	\$20,888 44	\$1,187 59	\$7,673 32	—	\$6,318 66	—	\$25,959 32	—	—	—

TABLE 8. — *General Statement as to Special Appropriations — Concluded.*

EXPENDED DURING FISCAL YEAR ENDING NOV. 30, 1916 — CON.							
INSTITUTIONS.	MISCELLANEOUS.			TOTAL EXPENDITURES.			Reverted Balances.
	Adding to Original Value.	Repairs and Renewals.	Adding to Original Value.	Repairs and Renewals.	Total Ex- penditures during Fiscal Year.	Total Ex- penditures to Date.	
The insane:—							
Worcester Hospital,	—	—	\$8,284 80	—	\$8,284 80	\$8,284 80	\$15,715 20
Taunton Hospital,	—	—	—	—	—	—	—
Northampton Hospital,	—	—	—	\$1,187 59	1,187 59	1,187 59	2,312 41
Danvers Hospital,	—	—	18,129 52	—	16,129 52	18,129 52	79,670 48
Westborough Hospital,	—	—	4,481 27	22 56	4,503 83	69,484 76	14,977 44
Boston Hospital, including Psychopathic Depart- ment,	\$508 85	—	36,006 16	—	36,006 16	348,851 40	116,131 60
Grafton Hospital,	2,541 50	—	73,761 74	—	73,761 74	577,025 07	17,835 73
Medfield Hospital,	—	—	22,217 80	—	22,217 80	27,603 97	5,396 03
Foxborough Hospital,	2,639 28	—	61,342 00	—	61,342 00	62,715 29	98,484 71
Gardner Colony,	—	—	10,958 04	—	10,958 04	21,329 89	5,466 27
Proposed Metropolitan Hospital,	—	—	44,225 27	—	44,225 27	114,825 43	174 57
Totals,	\$5,689 63	—	\$279,406 60	\$1,210 15	\$280,616 75	\$1,249,437 72	\$356,164 44
Miscellaneous:—							
Monson Hospital,	—	—	\$2,923 25	—	\$2,923 25	\$3,602 08	\$397 92
School for the Feeble-minded at Waltham,	—	—	6,100 87	—	6,100 87	9,716 39	20,983 61
Wrentham School,	—	—	75,335 81	—	75,335 81	349,860 10	78,665 04
Proposed School for Feeble-minded,	—	—	48,903 76	—	48,903 76	48,903 76	151,096 24
Totals,	—	—	\$133,263 69	—	\$133,263 69	\$412,182 33	\$251,142 81
Totals, hospitals and miscellaneous,	\$5,689 63	—	\$412,670 29	\$1,210 15	\$413,880 44	\$1,661,620 05	\$607,307 25
Mental Wards, State Infirmary,	—	—	—	—	—	—	—
Bridgewater Hospital,	—	—	—	—	—	—	—
Totals,	—	—	—	—	—	—	—
Totals, Aggregates,	\$5,689 63	—	\$412,670 29	\$1,210 15	\$413,880 44	\$1,661,620 05	\$607,307 25
							\$581 36

TABLE 9. — *Comparative Analysis of Pay Roll, by Departments.*

INSTITUTIONS.	MEDICAL SERVICE.						WARD SERVICE.				
	Full Roster.	AVERAGE NUMBER PERSONS.		AVERAGE MONTHLY COMPENSATION.		AVERAGE WEEKLY PER CAPITA COST.		Full Roster, Males.	AVERAGE NUMBER PERSONS, MALES.		
		In Service, 1916. ¹	Average Three Years, 1913-15. ²	1916. ¹	Average Three Years, 1913-15. ²	1916. ¹	Average Three Years, 1913-15. ²				
The insane:—											
Worcester Hospital,	19	14.53	15.74	\$84.02	\$85.94	\$0.1868	\$0.2484	105	86.39	87.95	129
Taunton Hospital,	17	13.84	14.51	74.05	82.55	.1762	.2271	74	81.47	75.98	72
Northampton Hospital,	8	4.71	6.98	111.10	109.67	.1235	.1901	65	37.66	43.86	65
Danvers Hospital,	25	18.75	17.54	62.36	74.36	.1764	.2010	72	65.56	70.45	116
Westborough Hospital,	17	16.82	18.59	76.33	80.60	.2229	.2688	96	86.43	88.19	119
Boston Hospital, including Psychopathic Department,	46	42.47	37.98	75.09	79.51	.4540	.4945	92	87.14	84.15	177
Grafton Hospital,	10	10.37	9.86	69.99	95.60	.0994	.1588	87	76.85	68.75	99
Medfield Hospital,	11	9.22	6.84	81.05	112.20	.1052	.1064	82	77.07	73.67	140
Foxborough Hospital,	7	7.05	4.91	76.65	108.86	.3745	.3792	24	21.21	21.78	15
Gardner Colony,	4	2.96	3.53	108.43	136.95	.0943	.1554	44	41.39	43.45	22
Totals and averages,	164	140.72	131.57 ³	\$76.36	\$87.01 ³	\$0.1945	\$0.2304 ³	741	661.17	636.45 ³	954
Miscellaneous:—											
Monson Hospital,	11	9.01	8.41	\$95.34	\$115.35	\$0.1980	\$0.2360	66	50.65	43.58	72
School for the Feeble-minded at Waltham,	7	5.23	5.76	120.24	170.84	.0907	.1464	27	24.34	24.75	166
Wrentham School,	3	2.52	3.10	139.03	167.14	.0810	.2113	10	7.79	3.68	114
Totals and averages,	21	16.76	22.18 ⁴	\$109.68	\$135.01 ⁴	\$0.1178	\$0.2042 ⁴	103	82.78	93.79 ⁴	352
Totals and averages, hospitals and miscellaneous,	185	157.48	153.75	\$79.90	\$93.90	\$0.1776	\$0.2243	844	743.95	730.24	1,306

¹ Excluding superintendent.

² Including superintendent.

³ Excludes Foxborough.

⁴ Includes Foxborough.

¹ Excluding superintendent.² Including superintendent.³ Excludes Foxborough.⁴ Includes Foxborough.

TABLE 9. — *Comparative Analysis of Pay Roll, by Departments — Continued.*

WARD SERVICE — CON.												
INSTITUTIONS.	AVERAGE NUMBER PERSONS, FEMALES.		Full Roster, Totals.	AVERAGE NUMBER PERSONS, TOTALS.		NUMBER OF PATIENTS TO ONE NURSE.						Number Persons boarded out, 1916.
	In Service, 1916.	Average Three Years, 1913-15.		In Service, 1916.	Average Three Years, 1913-15.	MALES.		FEMALES.		TOTALS.		
						1916.	Average Three Years, 1913-15.	1916.	Average Three Years, 1913-15.	1916.	Average Three Years, 1913-15.	
The insane:—												
Worcester Hospital,	93.05	107.84	234	184.44	195.79	9.15	7.92	6.80	6.46	7.90	7.12	49.64
Taunton Hospital,	83.46	78.71	146	164.93	149.69	8.14	8.47	7.40	7.49	7.77	7.98	61.05
Northampton Hospital, . .	34.76	41.58	130	72.42	85.44	12.64	10.75	13.41	10.78	13.01	10.76	35.65
Danvers Hospital,	96.54	93.68	188	162.10	164.13	8.96	8.30	9.52	9.50	9.29	8.97	22.23
Westborough Hospital, . . .	110.50	109.98	215	196.93	198.17	6.48	6.00	6.42	6.45	6.49	6.25	59.13
Boston Hospital, including Psycho- pathic Department,	167.42	159.26	269	254.56	243.41	6.19	5.59	6.40	5.90	6.32	5.79	10.83
Grafton Hospital,	91.70	78.87	186	168.55	147.62	10.19	9.24	9.50	9.33	9.81	9.28	33.27
Medfield Hospital,	130.98	128.21	222	208.05	201.88	8.34	9.21	7.37	7.68	7.73	8.23	31.15
Foxborough Hospital,	15.60	5.57	39	36.81	27.35	11.43	13.87	5.82	2.08	9.05	12.60	19
Gardner Colony,	19.38	18.24	66	60.77	61.69	11.18	10.41	14.62	14.24	12.27	11.53	38.66
Totals and averages,	843.39	811.37 ¹	1,695	1,509.56	1,447.82 ¹	8.69	8.10 ¹	6.67	7.66 ¹	7.56	7.86 ¹	341.80
Miscellaneous:—												
Monson Hospital,	54.14	52.79	138	104.79	96.37	8.71	8.87	10.35	10.64	9.55	9.84	—
School for the Feeble-minded at Wal- tham,	151.98	157.39	193	176.32	182.14	8.71	6.80	9.14	8.79	9.08	8.51	—
Wrentham School,	77.54	51.43	124	85.33	55.11	17.33	20.40	10.55	9.81	11.17	10.52	—
Totals and averages,	283.66	267.18 ²	455	366.44	360.97 ²	9.52	9.90 ²	9.91	9.21 ²	9.82	9.39 ²	341.80
Totals and averages, hospitals and miscellaneous,	1,132.05	1,078.55	2,150	1,876.00	1,808.79	8.78	8.34	7.43	8.04	8.00	8.16	341.80

¹ Excludes Foxborough.² Includes Foxborough.

TABLE 9. — *Comparative Analysis of Pay Roll, by Departments* — Continued.

INSTITUTIONS.	WARD SERVICE -- CON.										GENERAL ADMINISTRATION.		
	AVERAGE MONTHLY COMPENSATION.										Full Roster.	AVERAGE NUMBER PERSONS.	
	MALES.					FEMALES.						In Service, 1916. ¹	Average Three Years, 1913-15. ²
	AVERAGE THREE YEARS, 1913-15.		1916.		AVERAGE THREE YEARS, 1913-15.		1916.		AVERAGE WEEKLY PER CAPITA COST.				
	1916.	Average Three Years, 1913-15.	1916.	Average Three Years, 1913-15.	1916.	Average Three Years, 1913-15.	1916.	Average Three Years, 1913-15.	1916.	Average Three Years, 1913-15.			
The insane: --													
Worcester Hospital,	28 53	\$26 90	\$24 91	\$23 92	\$26 61	\$25 26	\$0.7511	\$0.8125	103	97.21	93.95		
Taunton Hospital,	29 41	30 12	23 77	24 57	26 55	27 40	.7531	.7799	106	97.18	93.74		
Northampton Hospital,	39 80	33 15	33 58	28 20	36 81	30 75	.6591	.6565	50	45.60	50.17		
Danvers Hospital,	31 48	30 62	26 48	25 45	28 50	27 66	.6973	.7001	91	79.77	79.59		
Westborough Hospital,	32 20	29 89	25 37	24 48	28 37	26 79	.9701	.9789	75	92.15	95.12		
Boston Hospital, including Psychopathic Department,	32 88	31 64	28 65	27 35	30 10	28 85	1.0907	1.1476	129	125.63	113.20		
Grafton Hospital,	28 34	27 64	25 69	24 88	26 90	26 16	.6206	.6477	122	118.32	94.44		
Medford Hospital,	36 37	33 16	30 85	27 98	32 90	29 87	.9631	.8374	128	118.65	118.26		
Foxborough Hospital,	31 18	32 18	27 80	25 41	29 74	31 17	.7586	.6066	45	38.38	37.83		
Gardner Colony,	31 59	30 06	29 38	13 08	30 88	27 97	.5517	.5547	56	55.71	49.40		
Totals and averages,	\$31 79	\$30 19 ³	\$27 29	\$25 81 ³	\$29 26	\$27 74 ³	\$0.7994	\$0.8006 ³	905	863.60	787.87 ³		
Miscellaneous: --													
Monson Hospital,	\$42 72	\$41 01	\$37 80	\$32 90	\$40 18	\$36 58	\$0.9707	\$0.8595	72	62.56	63.70		
School for the Feeble-minded at Waltham,	35 67	33 96	27 28	26 29	28 44	27 33	.7228	.7407	61	58.49	55.68		
Wrentham School,	43 88	43 94	29 54	29 06	30 84	30 08	.6086	.6636	35	26.86	20.38		
Totals and averages,	\$40 75	\$37 21 ⁴	\$29 92	\$27 98 ⁴	\$32 36	\$30 38 ⁴	\$0.7601	\$0.7476 ⁴	168	147.91	177.59 ⁴		
Totals and averages, hospitals and miscellaneous,	\$32 79	\$31 09	\$27 94	\$26 35	\$29 87	\$28 26	\$0.7908	\$0.7957	1,073	1,016.51	965.46		

¹ Includes superintendent.² Excludes superintendent.³ Excludes Foxborough.⁴ Includes Foxborough.

TABLE 9. — *Comparative Analysis of Pay Roll, by Departments* — Continued.

INSTITUTIONS.	GENERAL ADMINISTRATION — COD.				REPAIRS AND IMPROVEMENTS.			
	AVERAGE MONTHLY COMPENSATION.		AVERAGE WEEKLY PER CAPITA COST.		AVERAGE NUMBER PERSONS.		AVERAGE MONTHLY COMPENSATION.	
	1916. ¹	Average Three Years, 1913-15. ²	1916. ¹	Average Three Years, 1913-15. ²	Full Roster.	In Service, 1916.	Average Three Years, 1913-15.	1916.
The insane: —								
Worcester Hospital,	\$34 88	\$31 40	\$0.5189	\$0.4845	20	18.74	\$90 60	\$0.2607
Taunton Hospital,	39 28	34 43	.6564	.6146	11	9.23	84 64	.1239
Northampton Hospital,	52 12	35 26	.5608	.4427	9	6.67	82 02	.1447
Danvers Hospital,	47 02	43 45	.5769	.5404	28	20.49	92 36	.1377
Westborough Hospital,	46 59	42 82	.7505	.7512	9	6.92	95 65	.2881
Boston Hospital, including Psychopathic Department,	47 41	45 14	.8480	.8343	9	8.54	100 10	.3600
Grafton Hospital,	36 47	38 60	.5906	.5801	21	13.90	80 71	.1195
Medfield Hospital,	37 09	33 78	.6192	.5927	13	10.42	89 14	.1199
Foxborough Hospital,	49 79	42 99	1.3242	1.1783	12	8.08	78 95	.1798
Gardner Colony,	42 07	35 71	.6890	.5667	10	5.61	74 00	.1429
Totals and averages,	\$41 87	\$37 74 ³	\$0.6634	\$0.6008 ³	142	103.60	83 73	.4144
Miscellaneous: —								.2527
Monson Hospital,	\$12 55	\$36 75	\$0.6138	\$0.5700	7	5.12	\$91 18	.1935
School for the Feeble-minded at Waltham,	49 23	39 42	.4148	.3264	10	7.69	\$87 25 ³	\$0.1792
Wrentham School,	60 47	47 86	.3756	.4057	7	4.67	\$89 80	\$0.1060
Totals and averages,	\$45 62	\$39 45 ⁴	\$0.4592	\$0.4368 ⁴	24	17.48	125 78	\$0.1284
Totals and averages, hospitals and miscellaneous,	\$42 41	\$38 29	\$0.6185	\$0.5748	166	126.08	102 16	.1394
							105 74	.1103
							\$94 39 ⁴	\$0.1618 ⁴
							\$88 65	\$0.1753

¹ Includes superintendent.² Excludes superintendent.³ Excludes Foxborough.⁴ Includes Foxborough.

TABLE 9. — *Comparative Analysis of Pay Roll, by Departments* — Continued.

INSTITUTIONS.	Full Roster.	FARM, STABLE AND GROUNDS.					
		AVERAGE NUMBER OF PERSONS.		AVERAGE MONTHLY COMPENSATION.		AVERAGE WEEKLY PER CAPITA COST.	
		In Service, 1916.	Average Three Years, 1913-15.	1916.	Average Three Years, 1913-15.	1916.	Average Three Years, 1913-15.
The insane: —							
Worcester Hospital,	38	32.45	39.63	\$34.97	\$32.85	\$0.1737	\$0.2138
Taunton Hospital,	22	18.99	20.04	46.41	41.26	.1516	.1575
Northampton Hospital,	24	22.37	21.61	47.14	37.72	.2489	.2037
Danvers Hospital,	30	19.62	22.56	45.73	43.87	.1355	.1548
Westborough Hospital,	29	26.99	23.82	35.22	32.95	.1655	.1752
Boston Hospital, including Psychopathic Department,	22	22.95	24.41	38.51	35.02	.1258	.1401
Grafton Hospital,	60	52.93	54.67	35.70	33.56	.2586	.3080
Medfield Hospital,	35	35.67	34.41	33.76	32.49	.1695	.1846
Foxborough Hospital,	11	11.30	10.21	37.97	34.45	.2974	.2549
Gardner Colony,	18	14.91	11.85	50.33	51.35	.2206	.1942
Totals and averages,	289	258.18	258.00 ¹	\$39.03	\$36.02 ¹	\$0.1824	\$0.1875 ¹
Miscellaneous: —							
Monson Hospital,	24	20.76	22.51	\$48.92	\$42.08	\$0.2341	\$0.2310
School for the Feeble-minded at Waltham,	37	31.47	35.86	42.15	37.53	.1912	.2001
Wrentham School,	14	11.68	9.91	49.93	46.83	.1349	.2002
Totals and averages,	75	63.91	78.49 ²	\$45.77	\$40.00 ²	\$0.1875	\$0.2125 ²
Totals and averages, hospitals and miscellaneous,	364	322.09	336.49	\$40.37	\$36.86	\$0.1835	\$0.1932

¹ Excludes Foxborough.² Includes Foxborough.

TABLE 9. — *Comparative Analysis of Pay Roll, by Departments — Concluded.*

ALL PERSONS EMPLOYED.									
INSTITUTIONS.	Full Roster.	AVERAGE NUMBER OF PERSONS.		NUMBER OF PERSONS TO ONE EMPLOYEE.		AVERAGE MONTHLY COMPENSATION.		AVERAGE WEEKLY PER CAPITA COST.	Average Three Years, 1913-15.
		In Service, 1916.	Average Three Years, 1913-15.	1916.	Average Three Years, 1913-15.	1916.	Average Three Years, 1913-15.		
The insane: —									
Worcester Hospital,	414	347.37	361.89	4.20	3.85	\$35.58	\$33.78	\$1,891.2	\$2,008.8
Taunton Hospital,	302	304.17	285.69	4.21	4.18	35.98	34.98	1,882.0	1,903.0
Northampton Hospital,	221	151.77	171.33	6.21	5.35	47.47	38.25	1,700.0	1,689.0
Danvers Hospital,	362	300.73	308.76	5.08	4.78	41.29	40.74	1,874.2	1,965.3
Westborough Hospital,	345	339.81	347.15	3.74	3.56	37.78	35.76	2,229.3	2,257.6
Boston Hospital, including Psychopathic Department,	475	454.15	428.00	3.54	3.29	40.66	39.10	2,628.6	2,736.4
Grafton Hospital,	399	364.07	316.12	4.54	4.37	35.10	34.87	1,749.0	1,836.9
Medfield Hospital,	409	382.01	374.48	4.21	4.43	37.00	34.59	1,988.8	1,794.0
Foxborough Hospital,	114	101.62	87.07	3.28	3.74	45.00	42.47	3,169.1	2,671.7
Gardner Colony,	154	139.96	133.66	5.33	5.32	41.74	38.59	1,717.4	1,664.5
Totals and averages,	3,195	2,885.66	2,727.08 ¹	3.95	4.09 ¹	\$38.66	\$36.52 ¹	\$2,018.9	\$2,007.6
Miscellaneous: —									
Monson Hospital,	252	202.24	197.08	4.95	4.57	\$45.53	\$42.18	\$2,122.6	\$2,024.9
School for the Feeble-minded at Waltham,	308	279.20	288.18	5.73	5.38	38.74	36.89	1,581.4	1,581.4
Wrentham School,	183	131.06	92.03	7.27	6.12	43.24	43.38	1,310.4	1,634.6
Totals and averages,	743	612.50	664.36 ²	5.88	5.03 ²	\$41.94	\$40.67 ²	\$1,646.7	\$1,512.9
Totals and averages, hospitals and miscellaneous,	3,938	3,498.16	3,391.44	4.29	4.35	\$40.47	\$37.21	\$1,937.0	\$1,963.3

¹ Excludes Foxborough.² Includes Foxborough.

GENERAL STATISTICS.

TABLE 10. — *Statistical Form for State Institutions. — Prepared in Accordance with a Resolution of the National Conference of Charities and Corrections, adopted May 15, 1906.*

INSTITUTIONS.	SUPERINTENDENTS.	POPULATION.							
		NUMBER OF INMATES PRESENT AT BEGINNING OF FISCAL YEAR.		NUMBER RECEIVED DURING THE YEAR.				NUMBER DISCHARGED OR DIED DURING THE YEAR.	
		Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.
Worcester State Hospital,	Ernest V. Scribner, M.D.,	715	744	1,459	517	355	872	432	395
Taunton State Hospital,	Arthur V. Goss, M.D.,	692	644	1,336	366	269	635	400	248
Northampton State Hospital,	John A. Houston, M.D.,	481	474	955	283	267	550	282	223
Danvers State Hospital,	John B. Macdonald, M.D.,	658	850	1,508	495	433	928	511	386
Westborough State Hospital,	Harry O. Spalding, M.D.,	526	777	1,303	296	528	824	267	550
Boston State Hospital, ¹	Henry P. Frost, M.D.,	709	878	1,587	1,350	1,421	1,771	1,349	1,387
Grafton State Hospital,	James V. May, M.D.,	719	895	1,614	180	160	340	89	115
Medfield State Hospital,	Edward French, M.D.,	651	1,026	1,677	102	68	170	68	99
Gardner State Colony,	Charles E. Thompson, M.D.,	460	300	760	47	47	94	37	23
Monson State Hospital,	Everett Flood, M.D.,	525	490	1,015	165	108	273	171	124
Foxborough State Hospital,	Albert C. Thomas, M.D.,	247	82	329	75	53	128	75	35
Massachusetts School for the Feeble- minded at Waltham.	Walter E. Fernald, M.D.,	1,014	620 ²	1,634	236	98	334	275	103
Wrentham State School,	George L. Wallace, M.D.,	278	396	674	252	291	543	129	96
Totals,	.	7,675	8,176	15,851	4,364	4,098	8,462	4,085	3,814
									7,899

¹ Includes Psychopathic Department.

² Figure changed by institution.

TABLE 10. — *Statistical Form for State Institutions, etc. — Continued.*

INSTITUTIONS.	POPULATION — Con.								
	NUMBER AT END OF FISCAL YEAR.			DAILY AVERAGE ATTENDANCE DURING THE YEAR.			AVERAGE NUMBER OF OFFICERS AND EMPLOYEES DURING THE YEAR.		
	Males.	Females.	Totals.	Males.	Females.	Totals.			
Worcester State Hospital,	800	704	1,504	781.45	723.42	1,504.87	176	171	347
Taunton State Hospital,	658	665	1,323	671.42	667.69	1,339.11	152	152	304
Northampton State Hospital,	482	518	1,000	481.56	488.63	970.19	87	65	152
Danvers State Hospital,	642	897	1,539	651.15	871.00	1,522.15	156	145	301
Westborough State Hospital,	555	725	1,280	556.08	775.54	1,331.62	173	167	340
Boston State Hospital, ¹	710	912	1,622	718.17	897.92	1,616.09	193	261	454
Grafton State Hospital,	810	940	1,750	776.03	893.95	1,669.98	187	177	364
Medfield State Hospital,	685	995	1,680	640.72	1,001.12	1,641.84	177	205	382
Gardner State Colony,	470	324	794	472.43	306.41	778.84	79	61	140
Monson State Hospital,	519	474	993	525.77	477.60	1,003.37	104	98	202
Foxborough State Hospital,	247	100	347	241.27	86.43	327.70	66	36	102
Massachusetts School for the Feeble-minded at Waltham,	975	615	1,590	1,001.00	610.00	1,611.00	80	199	279
Wrentham State School,	401	591	992	399.24	554.21	953.45	35	96	131
Totals,	7,054	8,460	16,414	7,916.29	8,353.92	16,270.21	1,665	1,833	3,498

¹ Includes Psychopathic Department.

TABLE 10. — *Statistical Form for State Institutions, etc. — Concluded.*

INSTITUTIONS.	EXPENDED.						New Buildings, Permanent Improvements, Land, etc.	Grand Totals.
	CURRENT EXPENSES.							
	Salaries and Wages.	Clothing.	Subsistence.	Ordinary Repairs.	Office, Domestic and Outdoor Expenses.	Totals.		
Worcester State Hospital,	\$148,297 16	\$6,394 26	\$99,992 59	\$13,691 26	\$103,460 40	\$373,835 67	\$8,284 80	\$382,120 47
Taunton State Hospital,	131,334 47	11,752 04	81,533 27	20,517 63	105,350 47	350,987 88	-	350,987 88
Northampton State Hospital,	86,454 61	5,760 82	60,247 69	8,340 75	69,225 67	221,029 54	1,187 59	222,217 13
Danvers State Hospital,	149,017 02	7,089 77	87,955 54	32,368 48	106,160 37	383,191 18	18,129 52	401,320 70
Westborough State Hospital,	154,069 31	7,520 61	80,705 50	11,217 12	101,998 56	355,511 10	4,503 83	360,014 93
Boston State Hospital, 1	221,567 89	11,443 87	136,393 89	15,833 53	103,211 48	488,450 66	36,006 16	524,456 82
Grafton State Hospital,	153,334 17	11,044 63	102,527 63	18,044 62	116,833 18	401,784 23	73,761 74	475,545 97
Medfield State Hospital,	169,602 06	18,268 65	106,526 66	11,682 53	104,751 87	410,831 77	22,217 80	433,049 57
Gardner State Colony,	70,100 56	8,755 97	29,514 60	11,291 70	60,698 07	180,360 90	10,958 04	191,318 94
Monson State Hospital,	110,484 10	6,340 10	62,660 66	9,594 81	61,589 73	250,669 40	2,923 25	253,592 65
Foxborough State Hospital,	54,876 67	2,379 34	23,917 11	4,476 04	37,627 08	123,276 24	61,342 00	184,618 24
Massachusetts School for the Feeble-minded at Waltham.	129,781 69	16,352 79	74,237 42	12,165 74	88,332 88	320,870 52	6,100 87	326,971 39
Wrentham State School,	68,003 88	16,446 53	48,739 21	8,798 54	49,944 55	191,932 71	75,335 81	267,268 52
Totals,	\$1,646,923 59	\$130,149 38	\$994,951 77	\$178,022 75	\$1,102,684 31	\$4,052,731 80	\$320,751 41	\$4,373,483 21

¹ Includes Psychopathic Department.

TABLE 11. — *Classes of Persons under Supervision, their Number and Location, Oct. 1, 1916, and their Increase for the Year.*

	IN INSTITUTIONS.			INCREASE FOR THE YEAR.			TOTAL IN INSTITUTIONS AND FAMILY CARE BY TRUSTEES.			INCREASE FOR THE YEAR.			NON-RESIDENT.			EPILEPTIC.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
A. — Insane: —																		
Public institutions: —																		
Worcester Hospital,	793	654	1,447	85	44 ¹	41	794	700	1,494	84	43 ¹	41	—	—	—	6	2	8
Taunton Hospital,	648	613	1,261	31 ¹	24	7 ¹	656	663	1,319	33 ¹	20	13 ¹	—	—	—	7	12	19
Northampton Hospital,	477	486	963	1 ¹	46	45	482	518	1,000	1	46	47	—	—	—	5	3	8
Danvers Hospital,	640	874	1,514	16 ¹	38	22	641	896	1,537	15 ¹	48	33	—	—	—	14	9	23
Westborough Hospital,	553	632	1,185	30	30 ¹	—	554	685	1,239	29	37 ¹	8 ¹	1	3	4	6	6	12
Boston Hospital,	606	886	1,582	4	44	48	608	892	1,500	5	41	46	—	—	—	16	10	26
Mental Wards, State Infirmary,	263	514	777	3	5	8	263	514	777	3	5	8	—	—	—	14	21	35
Grafton Hospital,	810	911	1,721	92	42	134	810	940	1,750	91	45	136	—	—	—	122	126	248
Medfield Hospital,	684	963	1,647	34	35 ¹	1 ¹	685	995	1,680	34	31 ¹	3	—	—	—	36	33	69
Gardner Colony,	454	295	749	1	18	19	470	324	794	10	24	34	—	—	—	—	2	2
Monson Hospital,	184	139	323	24 ¹	19 ¹	43 ¹	184	139	323	24 ¹	19 ¹	43 ¹	—	—	—	184	139	323
Bridgewater Hospital,	839	—	839	17	—	17	839	—	839	17	—	17	—	—	—	23	—	23
Foxborough Hospital,	247	100	347	—	19	19	247	100	347	—	18	18	—	—	—	5	3	8
Totals,	7,228	7,067	14,295	194	108	302	7,263	7,366	14,629	202	117	319	1	3	4	440	364	804
Family care under the Commission,	—	64	64	1 ¹	21 ¹	22 ¹	—	64	64	1 ¹	21 ¹	22 ¹	—	—	—	—	—	—
Totals, public,	7,228	7,131	14,359	193	87	280	7,263	7,430	14,693	201	96	297	1	3	4	440	364	804
Private institutions: —																		
McLean Hospital,	85	126	211	5	4 ¹	1	85	126	211	5	4 ¹	1	15	24	39	1	2	3
Smaller institutions,	28	116	144	1	3	4	28	116	144	1	3	4	3	34	37	1	—	1
Totals, private,	113	242	355	6	1 ¹	5	113	242	355	6	1 ¹	5	18	58	76	2	2	4
Totals, public and private,	7,341	7,374	14,715	199	86	285	7,376	7,672	15,048	207	95	302	19	61	80	442	366	808

1 Decrease.

TABLE 11. — *Classes of Persons under Supervision, etc. — Concluded.*

	NUMBER.			INCREASE FOR THE YEAR.			NON-RESIDENT.			EPILEPTIC.			SCHOOL.			CUSTODIAL.			TOTAL INMATES.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
B. — Feeble-minded: —																					
School for the Feeble-minded at Waltham,	975	615	1,590	391	51	441	9	4	13	8	5	13	442	217	659	534	397	931	975	615	1,590
Wrentham School,	401	591	992	123	195	318	—	—	—	—	—	—	231	150	381	170	441	611	401	591	992
Elm Hill Institution,	36	12	48	21	1	22	28	9	37	3	3	6	11	6	17	25	6	31	36	12	48
Smaller private institutions,	6	6	12	1	2	3	—	—	—	—	—	—	4	5	9	2	1	3	6	6	12
Alms-houses and private families, ²	117	126	243	5	4	9	—	—	—	—	—	—	—	—	—	—	—	—	117	126	243
Totals, feeble-minded,	1,535	1,350	2,885	88	193	281	37	13	50	11	8	19	688	378	1,066	731	845	1,576	1,535	1,350	2,885
C. — Inebriates: —																					
Public institutions,	3	28	31	3	18	21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Private institutions,	6	1	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals, inebriates,	9	29	38	3	18	21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
D. — Epileptics: —																					
Monson Hospital,	519	474	993	61	16	77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Public institutions for insane,	256	225	481	26	31	57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
School for the Feeble-minded at Waltham,	8	5	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Private institutions,	5	6	11	11	2	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals, epileptics,	788	710	1,498	19	17	36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Whole number of persons under supervision,	9,294	9,437	18,731	314	273	587	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Viz.: insane, feeble-minded, epileptic and inebriate,	9,255	9,386	18,641	316	273	589	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Voluntary mental patients (same),	4	27	31	1	3	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Temporary care,	18	28	46	7	5	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other classes,	17	46	63	4	2	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

¹ Decrease.² Figures taken from reports of overseers of poor, March 31, 1916.

TABLE 12. — *Admissions, Discharges, etc., of the Insane in Institutions and boarded in Private Families for the Year ending Sept. 30, 1916.*

	Worcester Hospital.	Taunton Hospital.	Northampton Hospital.	Danvers Hospital.	Westborough Hospital.	Boston Hospital.	Mental Wards, State Infirm. ary.	Grafton Hospital.	Medfield Hospital.	Gardner Colony.
Remaining under care Sept. 30, 1915,										
Men,	1,453	1,332	953	1,504	1,247	1,544	709	1,614	1,677	760
Women,	710	689	481	656	525	693	200	719	651	460
In institution,	743	643	472	848	722	851	509	895	1,026	300
Men,	1,406	1,268	918	1,492	1,185	1,534	709	1,587	1,648	730
Women,	708	679	478	650	523	692	200	718	650	453
In family care, ¹	693	589	440	836	662	842	509	869	998	277
Men,	47	64	35	12	62	10	—	27	29	30
Women,	2	10	3	—	2	1	—	1	1	7
Admitted during the year,	45	54	32	12	60	9	—	26	28	23
Men,	814	597	523	915	620	1,054	166	340	168	94
Women,	477	341	262	489	272	506	54	180	102	47
From the community,	337	256	261	426	348	548	112	160	66	47
Men,	669	499	391	703	473	868	37	47	90	—
Women,	395	282	189	379	210	421	21	31	37	—
By commitment,	274	217	132	324	263	447	16	16	53	—
Men,	661	493	367	670	419	624	37	47	88	—
Women,	391	278	186	362	189	284	21	31	35	—
Voluntary,	270	215	181	308	230	340	16	16	53	—
Men,	8	6	24	33	54	244	—	—	2	—
Women,	4	4	13	17	21	137	—	—	2	—
By transfer,	4	2	11	16	33	107	—	—	—	—
From visit,	10	7	27	28	13	15	111	277	73	79
From escape,	20	17	18	33	27	37	7	1	2	1
Nominally for discharge,	5	1	3	7	—	6	—	3	1	6
Whole number of cases within the year,	110	73	84	144	107	128	11	12 ²	2	8
	2,267	1,929	1,476	2,419	1,867	2,508	875	1,954	1,845	854

¹ Patients boarded in families by institution.² One case to be included in deaths.

TABLE 12. — Admissions, Discharges, etc., of the Insane in Institutions and boarded in Private Families for the Year ending Sept. 30, 1916 — Continued.

	Worcester Hospital.	Taunton Hospital.	Northampton Hospital.	Danvers Hospital.	Westborough Hospital.	Boston Hospital.	Mental Wards, State Infirm- ary.	Grafton Hospital.	Medfield Hospital.	Gardner Colony.
Dismissed within the year,	773	610	476	882	628	1,008	158	204	165	60
Men,	383	374	261	504	243	501	68	89	51	37
Women,	390	236	215	378	385	507	107	115	97	23
Viz.: Discharged,	279	180	106	329	219	506	32	28	34	15
Men,	170	110	86	186	78	255	9	9	16	9
Women,	109	70	80	143	141	251	23	19	18	6
Recovered,	29	36	61	50	74	122	3	4	8	1
Men,	20	30	37	34	29	49	1	1	5	1
Women,	9	6	24	16	45	73	3	3	3	1
Capable of self-support,	85	45	40	60	60	33	8	5	10	5
Improved,	63	62	48	230	56	131	21	12	11	8
Not improved,	91	34	44	44	25	125	8	7	4	5
Not insane,	11	3	5	5	4	95	—	—	1	—
Died,	235	170	107	211	139	229	91	119	93	13
Men,	109	61	61	114	65	133	26	50	35	9
Women,	116	73	46	97	74	96	65	69	58	4
Transferred,	94	137	62	103	100	64	16	8	7	19
On visit Sept. 30, 1916,	154	118	118	221	162	193	15	28	26	7
On escape Sept. 30, 1916,	21	4	3	18	8	16	4	21	5	6
Nominally dismissed for change of status,	—	1	—	—	—	—	—	—	—	—
Remaining under care Sept. 30, 1916,	1,494	1,319	1,000	1,537	1,239	1,590	717	1,750	1,680	704
Men,	704	656	482	841	554	698	203	810	685	470
Women,	790	663	518	896	685	892	514	940	995	324
In institution,	1,447	1,281	963	1,514	1,183	1,582	717	1,721	1,647	749
Men,	738	648	477	840	553	666	203	810	684	454
Women,	654	613	486	874	632	886	514	911	963	295
In family care,	47	58	37	23	54	8	—	29	33	45
Men,	1	8	5	23	1	2	—	—	1	16
Women,	46	50	32	22	53	6	—	29	32	29

Supported by the State,	1,291	1,165	778	1,266	936	1,385	712	1,694	1,631	773
Reimbursing,	23	78	89	135	109	117	5	50	46	14
Private,	110	76	133	136	194	88	—	6	3	7
Daily average number under care,										
In institution,	1,499.00	1,337.48	967.25	1,591.83	1,982.36	1,572.42	703.16	1,669.98	1,641.82	773.84
In family care,	1,449.54	1,275.94	932.79	1,501.54	1,221.28	1,559.46	703.16	1,636.84	1,610.42	742.90
State,	49.54	61.54	34.46	20.29	61.08	12.96	—	33.14	31.40	35.94
Reimbursing,	1,290.33	1,171.30	736.73	1,261.50	989.78	1,383.35	699.44	1,600.27	1,588.95	761.99
Private, ¹	98.05	92.14	102.97	128.58	92.21	107.70	3.72	64.56	51.18	13.31
	410.71	73.94	127.55	131.75	200.37	81.37	—	5.15	1.69	3.54
Persons first admitted to any insane hospital,										
Men,	530	400	366	532	342	688	31	38	79	—
Women,	327	229	156	289	156	347	16	23	30	—
Recent (insane less than one year),	203	171	150	243	186	341	15	15	49	—
Chronic (insane one year or more),	252	219	170	291	147	411	19	1	31	—
Unknown,	194	137	126	216	129	232	11	10	18	—
	84	44	10	25	66	45	1	27	30	—
Persons admitted from the community,										
Viz.: From cities and large towns,	666	499	381	695	472	851	37	47	89	—
From country districts,	566	317	233	590	341	833	32	47	86	—
Unknown,	100	182	148	105	130	18	5	—	3	—
	—	—	—	—	1	—	—	—	—	—
Whole number of persons within the year,	2,145	1,847	1,381	2,258	1,755	2,419	884	1,942	1,842	846
Whole number of persons admitted within the year,	699	524	429	762	511	908	155	328	165	86
Whole number of persons dismissed within the year,	661	535	388	735	519	869	147	192	163	52

¹ Includes self-supporting.

TABLE 12. — *Admissions, Discharges, etc., of the Insane in Institutions and boarded in Private Families for the Year ending Sept. 30, 1916 — Continued.*

	Monson Hospital.	Bridgewater Hospital.	Foxborough Hospital.	Total Public Institutions.	Family Care. ¹	Total Public.	McLean Hospital.	Smaller Institutions.	Total Private.	Total Public and Private.
Remaining under care Sept. 30, 1915,										
Men,	366	822	329	14,310	86	14,396	210	140	350	14,746
Women,	208	822	247	7,061	1	7,062	80	27	107	7,169
In institution,	158	—	82	7,249	85	7,334	130	113	243	7,577
Men,	366	822	328	13,993	—	13,993	210	140	350	14,343
Women,	208	822	247	7,064	—	7,064	80	27	107	7,141
In family care, ²	158	—	81	6,959	86	6,959	130	113	243	7,202
Men,	—	—	1	317	1	403	—	—	—	403
Women,	—	—	1	27	1	28	—	—	—	28
Admitted during the year,										
Men,	28	105	128	5,552	30	5,582	138	213	351	5,933
Women,	17	105	75	2,927	—	2,927	71	63	134	3,061
From the community,	11	—	53	2,625	30	2,655	67	150	217	2,872
Men,	14	95	98	3,984	—	3,984	122	184	306	4,290
Women,	8	95	56	2,134	—	2,134	60	54	114	2,248
By commitment,	6	—	42	1,850	—	1,850	62	130	192	2,042
Men,	14	95	98	3,613	—	3,613	51	37	88	3,701
Women,	8	95	56	1,336	—	1,336	30	8	38	1,374
Voluntary,	6	—	42	1,677	—	1,677	21	29	50	1,727
Men,	6	—	—	371	—	371	71	147	218	589
Women,	—	—	—	198	—	198	30	46	76	274
By transfer,	6	—	16	173	—	173	41	101	142	315
From visit,	—	2	7	664	30	664	6	20	26	720
From escape,	1	1	1	171	—	171	4	1	5	176
Nominally for discharge,	8	7	6	33	—	33	—	—	—	33
Whole number of cases within the year,	394	927	457	19,862	116	19,978	348	353	701	20,679

Dismissed within the year,	71	88	110	5,233	52	5,285	137	209	346	5,631
Men,	41	88	75	2,725	1	2,726	66	62	128	2,854
Women,	30	~	35	2,508	51	2,509	71	147	218	2,777
Viz.: Discharged,	16	38	42	1,904	3	1,907	93	168	261	2,168
Men,	13	38	23	1,022	3	1,022	40	50	90	1,112
Women,	3	~	19	882	3	885	53	118	171	1,056
Recovered,	~	12	6	406	~	406	38	15	53	459
Men,	~	12	4	222	~	222	19	4	245	245
Women,	~	~	2	184	~	184	19	11	30	214
Capable of self-support,	~	2	14	291	1	292	17	1	18	310
Improved,	12	11	8	682	2	684	21	97	118	772
Not improved,	4	11	14	429	~	429	17	51	68	497
Not insane,	~	2	~	126	~	126	~	4	130	130
Died,	32	24	43	1,496	1	1,497	21	8	29	1,526
Men,	22	24	35	780	~	780	16	2	18	798
Women,	10	~	8	716	~	717	5	6	11	728
Transferred,	17	22	2	651	48	699	9	15	24	723
On visit Sept. 30, 1916,	4	4	15	1,065	~	1,065	14	16	30	1,095
On escape Sept. 30, 1916,	2	~	8	116	~	116	~	2	2	118
Nominally dismissed for change of status,	~	~	~	1	~	1	~	~	~	1
Remaining under care Sept. 30, 1916,	323	839	347	14,629	64	14,693	211	144	355	15,048
Men,	184	839	247	7,263	~	7,263	85	28	113	7,376
Women,	139	~	100	7,366	64	7,430	126	116	242	7,672
In institution,	323	839	347	14,295	~	14,295	211	144	355	14,650
Men,	184	839	247	7,228	~	7,228	85	28	113	7,341
Women,	139	~	100	7,067	~	7,067	126	116	242	7,309
In family care,	~	~	~	334	64	398	~	~	~	398
Men,	~	~	~	35	~	35	~	~	~	35
Women,	~	~	~	299	64	363	~	~	~	363
Supported by the State,	299	832	336	13,098	60	13,158	~	~	~	13,158
Reimbursing,	16	7	8	767	~	768	~	~	~	768
Private,	8	~	3	764	3	767	211	144	355	1,122
Daily average number under care,	343.17	827.76	327.70	14,472.86	73.02	14,546.48	207.19	136.04	344.23	14,890.71
In institution,	343.17	827.76	327.51	14,132.31	~	14,132.31	207.19	136.04	344.23	14,476.54
In family care,	~	~	0.19	840.55	73.62	414.17	~	~	~	414.17
State,	325.13	823.48	309.72	12,941.97	69.62	13,011.59	~	~	~	13,011.59
Reimbursing,	10.08	4.28	15.10	783.98	1.00	784.98	~	~	~	784.98
Private, ³	7.96	~	2.88	746.91	3.00	749.91	~	~	~	749.91

¹ Patients boarded in families under the Commission.² Patients boarded in families by institution.³ Includes self-supporting.

TABLE 12. — *Admissions, Discharges, etc., of the Insane in Institutions and boarded in Private Families for the Year ending Sept. 30, 1916* — Concluded.

	Monson Hospital.	Bridgewater Hospital.	Foxborough Hospital.	Total Public Institutions.	Family Care. ¹	Total Public.	McLean Hospital.	Smaller Institutions.	Total Private.	Total Public and Private.
Persons first admitted to any insane hospital,										
Men,	13	73	77	3,109	—	3,109	76	138	214	3,823
Women,	7	73	38	1,691	—	1,691	40	42	82	1,773
Recent (insane less than one year),	6	—	39	1,418	—	1,418	36	96	132	1,550
Chronic (insane one year or more),	13	8	26	1,588	—	1,588	48	116	162	1,750
Unknown,	—	34	39	1,146	—	1,146	30	22	52	1,198
	—	31	12	375	—	375	—	—	—	375
Persons admitted from the community,										
Viz.: From cities and large towns,	14	95	98	3,898	—	3,898	119	176	289	4,161
From country districts,	9	74	89	3,177	—	3,177	88	123	206	3,363
Unknown,	5	21	9	720	—	720	31	52	82	796
	—	—	—	1	—	1	—	1	1	2
Whole number of persons within the year,	386	920	451	18,196	115	18,224	335	327	649	18,815
Whole number of persons admitted within the year,	20	98	122	4,103	30	4,103	128	194	294	4,371
Whole number of persons dismissed within the year,	63	81	104	3,838	52	3,842	129	196	296	4,130

¹ Patients boarded in families under the Commission.

TABLE 13. — *Forms of Mental Disease in Patients committed, discharged or who died, at Public Institutions for the Insane and McLean Hospital — Continued.*

DISCHARGES, RECOVERIES AND CAPABLE OF SELF-SUPPORT — Continued.														
	DANVERS HOSPITAL.		WESTBOROUGH HOSPITAL.		BOSTON HOSPITAL.		GRAFTON HOSPITAL.		MEDFIELD HOSPITAL.		GARDNER COLONY.		MONSON HOSPITAL.	
	Recovered.	Capable of Self-support.	Recovered.	Capable of Self-support.	Recovered.	Capable of Self-support.	Recovered.	Capable of Self-support.	Recovered.	Capable of Self-support.	Recovered.	Capable of Self-support.	Recovered.	Capable of Self-support.
First admitted to any hospital: —														
A. — Most curable: —														
Manic-depressive psychosis,	14	—	16	5	48	—	1	—	1	—	—	—	—	—
Allied to manic-depressive psychosis,	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Melancholia, acute,	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Confusional psychosis, acute,	—	—	1	—	1	—	—	—	—	—	—	—	—	—
Hysterical psychosis,	—	—	—	—	2	—	—	—	—	—	—	—	—	—
Neurasthenia,	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Psychoneurosis,	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Symptomatic psychosis,	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Exhaustion psychosis,	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Infection exhaustion psychosis,	—	—	1	—	2	—	1	—	3	—	—	—	—	—
Alcoholic psychosis, acute,	13	—	5	3	22	—	—	—	—	—	—	—	—	—
Toxic psychosis, acute,	3	—	2	—	—	—	—	—	—	—	—	—	—	—
Psychosis with somatic disease,	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Delirium, acute,	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total A,	31	1	25	8	75	—	2	—	4	—	—	—	—	—

B. — Less curable:—												
Involution psychosis,	.	.	.	.	.	.	.	.	.	.	.	.
Choreic psychosis,	.	.	.	.	.	5	—	—	—	—	—	—
Psychopathic inferiority,	.	.	.	.	.	—	4	—	—	—	—	—
Traumatic psychosis,	.	.	.	.	.	—	1	—	—	—	—	—
Alcoholic psychosis, chronic,	.	.	.	.	.	2	5	—	—	—	—	—
Toxic psychosis, chronic,	1	.	.	.	.	—	—	—	—	—	—	—
Korsakow's psychosis,	.	.	.	.	.	1	5	—	—	—	—	—
Dementia præcox,	.	.	.	.	.	13	—	—	—	—	—	—
Paranoia,	.	.	.	.	.	—	—	—	—	—	—	—
Paranoid condition,	.	.	.	.	.	—	2	—	—	—	—	—
Total B,	1	—	—	—	—	9	17	—	—	—	—	—
Total A, B,	32	—	—	—	—	84	17	2	5	—	—	—
C. — Most incurable:—												
Pellagrous psychosis,	.	.	.	.	.	—	—	—	—	—	—	—
General paralysis,	.	.	.	.	.	—	1	—	—	—	—	—
Cerebral syphilis,	.	.	.	.	.	—	—	—	—	—	—	—
Coarse brain lesions,	1	.	.	.	.	—	1	—	—	—	—	—
Epileptic psychosis,	.	.	.	.	.	—	—	—	—	—	—	—
Imbecility,	.	.	.	.	.	—	—	—	1	—	—	—
Senile psychosis,	.	.	.	.	.	—	—	—	—	—	—	—
Total C,	1	—	—	—	—	—	2	—	1	—	—	—
Total A, B, C,	33	—	—	—	—	84	19	2	6	—	—	—
D. — Undiagnosed,	.	.	.	.	.	5	—	—	—	—	—	—
Not insane,	.	.	.	.	.	—	—	—	—	—	—	—
Total D,	—	—	—	—	—	5	—	—	—	—	—	—
Total first admissions,	33	—	—	—	—	89	19	2	6	—	—	—

TABLE 13. — *Forms of Mental Disease in Patients committed, discharged or who died, at Public Institutions for the Insane and McLean Hospital — Continued.*

	DISCHARGES, RECOVERIES AND CAPABLE OF SELF-SUPPORT — Concluded.										TOTAL DISCHARGES.					Died.	Aggregate Discharges and Deaths.		
	FOXBOROUGH HOSPITAL.		MENTAL WARDS, STATE INFIRMARY.		BRIDGEWATER HOSPITAL.		MCLEAN HOSPITAL.		Capable of Self-support.	Improved.	Not Improved.	Total Discharges.							
	Recovered.	Capable of Self-support.	Recovered.	Capable of Self-support.	Recovered.	Capable of Self-support.	Recovered.	Capable of Self-support.											
First admitted to any hospital: —																			
A. — Most curable: —																			
Manic-depressive psychosis.	3	3	2	—	6	—	20	8					140	34	94	27	295	46	341
Allied to manic-depressive psychosis.	—	—	—	—	—	—	—	—					—	1	1	—	2	—	2
Melancholia, acute.	—	—	—	—	2	—	—	—					2	—	—	—	2	—	2
Confusional psychosis, acute.	—	—	—	—	—	—	—	—					3	—	—	—	1	—	1
Hysterical psychosis.	—	—	—	—	—	—	—	—					2	—	3	5	8	1	7
Neurasthenia.	—	—	—	—	—	—	—	—					2	—	3	6	9	1	8
Psychoneurosis.	—	—	—	—	—	—	—	—					1	—	2	5	13	—	13
Symptomatic psychosis.	—	—	—	—	—	—	—	—					—	2	—	—	—	—	—
Exhaustion psychosis.	—	—	—	—	—	—	—	—					—	2	—	—	—	—	—
Infection exhaustion psychosis.	—	—	—	—	—	—	—	—					—	—	—	—	—	—	—
Alcoholic psychosis, acute.	2	1	1	—	2	—	—	—					5	—	6	—	11	9	20
Toxic psychosis, acute.	—	2	—	—	—	—	—	—					87	11	21	2	121	5	126
Psychosis with somatic disease.	—	—	—	—	—	—	—	—					8	3	2	—	13	5	18
Delirium, acute.	—	—	—	—	—	—	—	—					—	—	—	—	—	1	1
Total A.	5	6	3	—	10	—	20	9					250	54	137	38	479	75	554

B. — Less curable: —												
Involution psychosis,	—	—	—	—	—	—	—	—	—	—	—	43
Choreic insanity,	—	—	—	—	—	—	—	—	—	—	—	2
Psychopathic inferiority,	—	—	—	—	—	—	—	—	—	—	—	2
Traumatic psychosis,	—	—	—	—	—	—	—	—	—	—	—	4
Alcoholic psychosis, chronic,	1	—	—	—	—	—	—	—	—	—	—	8
Toxic psychosis, chronic,	—	—	—	—	—	—	—	—	—	—	—	2
Korsakow's psychosis,	—	—	—	—	—	—	—	—	—	—	—	5
Dementia praecox,	2	—	—	—	—	—	—	—	—	—	—	14
Paranoia,	—	—	—	—	—	—	—	—	—	—	—	22
Paranoid condition,	—	—	—	—	—	—	—	—	—	—	—	16
Total B.,	3	—	—	—	—	—	—	—	—	—	—	87
Total A, B,	5	9	3	—	10	1	20	11	2	—	—	1,428
C. — Most incurable: —												
Pellagrous psychosis,	—	—	—	—	—	—	—	—	—	—	—	3
General paralysis,	—	—	—	—	—	—	—	—	—	—	—	222
Cerebral syphilis,	—	—	—	—	—	—	—	—	—	—	—	11
Coarse brain lesions,	—	—	—	—	—	—	—	—	—	—	—	28
Epileptic psychosis,	—	—	—	—	—	—	—	—	—	—	—	276
Imbecility,	—	—	—	—	—	—	—	—	—	—	—	51
Senile psychosis,	—	—	—	—	—	—	—	—	—	—	—	80
Total C,	1	—	—	—	—	—	—	—	—	—	—	328
Total A, B, C,	5	10	3	—	10	1	20	11	—	—	—	1,081
Undiagnosed,	—	—	—	—	—	—	—	—	—	—	—	2,509
Not insane,	—	—	—	—	—	—	—	—	—	—	—	1,244
Total D,	—	—	—	—	—	—	—	—	—	—	—	118
Total first admissions,	5	10	3	—	10	1	22	11	—	—	—	1,257

TABLE 13. — *Forms of Mental Disease in Patients committed, discharged or who died, at Public Institutions for the Insane and McLean Hospital* — Continued.

	COMMITMENTS.														DISCHARGES, RECOVERIES AND CAPABLE OF SELF-SUPPORT.						
															WORCESTER HOSPITAL.		TAUNTON HOSPITAL.		NORTHAMPTON HOSPITAL.		
	Worcester Hospital.	Taunton Hospital.	Northampton Hospital.	Danvers Hospital.	Westborough Hospital.	Boston Hospital.	Grafton Hospital.	Medfield Hospital.	Monson Hospital.	Foxborough Hospital.	Mental State Infirmary.	Bridgewater Hospital.	McLean Hospital.	Total Commitments.	Recovered.	Capable of Self-support.	Recovered.	Capable of Self-support.	Recovered.	Capable of Self-support.	Recovered.
																Capable of Self-support.		Capable of Self-support.		Capable of Self-support.	
Other admissions: — A. — Most curable: — Manic-depressive psychosis, Allied to manic-depressive psychosis, Hysterical psychosis, . . . Neurasthenia, . . . Psychoneurosis, . . . Infection exhaustion psychosis, Alcoholic psychosis, acute, Symptomatic psychosis, . . . Toxic psychosis, acute, . . . Total A, . . .	26 1 1 — — — 3 3 — — 31	13 — — — — — 3 2 — — 15	37 — — — — — 3 3 — — 44	46 — — — — — 4 7 12 1 — 70	52 — — — — — — 1 1 — — 56	74 — — — — — — 2 2 — — 79	— — — — — — — — — — —	1 — — — — — — — — — 1	— — — — — — — — — — —	3 — — — — — — 1 — — 4	1 — — — — — — — — — 1	4 — — — — — — 1 — — 5	33 — — — — — — — — — 33	290 1 4 2 7 8 23 2 1 — 339	7 — — — — — — — — — 7	6 — — — — — — — — — 6	2 — — — — — — 1 — — 4	5 — — — — — — 1 — — 6	15 — — — — — — 3 — — 18	4 — — — — — — 1 — — 6	— — — — — — — — — 6

TABLE 13. — *Forms of Mental Disease in Patients committed, discharged or who died, at Public Institutions for the Insane and McLean Hospital — Concluded.*

	DISCHARGES, RECOVERIES AND CAPABLE OF SELF-SUPPORT — Concluded.								TOTAL DISCHARGES.					Died.	Aggregate Discharges and Deaths.
	FOXBOROUGH HOSPITAL.		MENTAL WARDS, STATE INFIRMARY.		BRIDGEWATER HOSPITAL.		MCLEAN HOSPITAL.		Recovered.	Capable of Self- support.	Improved.	Not improved.	Total Dis- charges.		
	Recovered.	Capable of Self- support.	Recovered.	Capable of Self- support.	Recovered.	Capable of Self- support.	Recovered.	Capable of Self- support.							
Other admissions: —															
A. — Most curable: —															
Manic-depressive psychosis, .	1	1	—	—	—	—	5	101	38	61	22	222	275		
Allied to manic-depressive psychosis, .	—	—	—	—	—	—	—	—	—	—	—	—	—		
Hysterical psychosis, .	—	—	—	—	—	—	—	—	—	—	—	—	—		
Neurasthenia, .	—	—	—	—	—	—	—	—	—	—	—	—	—		
Psychoneurosis, .	—	—	—	—	—	—	—	—	—	—	—	—	—		
Infection exhaustion psy- chosis, .	—	—	—	—	—	—	—	23	5	3	—	31	32		
Alcoholic psychosis, acute, .	—	—	—	—	—	—	—	2	—	—	—	—	2		
Symptomatic psychosis, .	—	—	—	—	—	—	—	—	—	—	—	—	—		
Toxic psychosis, acute, .	—	—	—	—	—	—	—	—	—	—	—	—	—		
Total A,	1	1	—	—	2	1	5	126	48	68	22	264	319		

TABLE 14. — *Probable Causes of Mental Diseases in Persons admitted to Public Institutions for the Insane and McLean Hospital who were received for the First Time at Any Hospital.*

	First admitted.	PREDISPOSING CAUSES.		
		Hereditary Tendency.	Neurotic Tendency.	Alcoholic Intemper- ance.
A. — Physical: —				
Adolescence,	3	2	3	—
Alcoholic intemperance, . . .	386	27	18	153
Alcoholic intemperance and other causes,	2	1	—	—
Anæmia, pernicious,	4	—	—	—
Apoplexy,	2	—	—	—
Arteriosclerosis,	134	17	4	9
Arteriosclerosis and other causes, .	3	—	—	1
Asthma,	1	1	—	—
Brain tumor,	5	—	—	1
Cardio-genetic disease,	2	—	—	—
Cardio-renal disease,	9	1	—	2
Cerebral hemorrhage,	19	—	—	1
Childbearing,	38	17	4	—
Childbearing and tuberculosis, . .	1	—	—	—
Chorea,	1	—	—	—
Coarse brain lesions,	5	—	1	—
Congenital,	143	23	16	10
Consanguinity and adolescence, . .	1	—	1	—
Constitutional defect,	137	19	35	23
Constitutional defect and other causes,	4	—	—	—
Dentition,	1	1	—	—
Diabetes,	2	—	—	—
Drug habit,	7	—	1	—
Drug habit and exhaustion,	1	—	—	—
Encephalitis,	1	—	—	—
Endocarditis, chronic,	2	—	—	—
Epilepsy,	78	18	9	12
Goiter,	1	1	1	—
Heat prostration,	1	—	—	—
Heredity,	175	127	26	5
Immorality,	1	1	—	—
Infectious disease,	18	6	—	—
Involution,	45	5	2	5
Lead poisoning,	3	—	—	1
Masturbation,	3	—	—	—
Meningitis, spinal,	1	—	—	—
Menopause,	33	3	6	1
Multiple sclerosis,	1	—	—	—
Nephritis,	1	—	—	—
Nephritis and arteriosclerosis, . .	1	—	—	—
Otitis media, acute,	1	—	—	—

TABLE 14. — *Probable Causes of Mental Diseases in Persons admitted to Public Institutions for the Insane and McLean Hospital who were received for the First Time at Any Hospital—Concluded.*

	First admitted.	PREDISPOSING CAUSES.		
		Hereditary Tendency.	Neurotic Tendency.	Alcoholic Intemper- ance.
A. — Physical — <i>Con.</i>				
Pachymeningitis and arteriosclero- sis,	1	—	—	—
Pellagra,	12	—	—	2
Post operative,	8	3	—	—
Post-partum hemorrhage,	1	—	—	—
Rachitis,	2	—	—	—
Rheumatism, acute articular,	1	—	—	—
Senility;	191	16	8	7
Senility and arteriosclerosis,	168	7	8	6
Senility and tuberculosis,	1	—	—	—
Somatic disease,	22	7	2	1
Syphilis,	309	23	25	22
Thyrogenic,	1	1	—	—
Thyroidism,	2	—	1	1
Trauma,	31	5	3	10
Tuberculosis,	6	—	—	1
Tumor,	1	1	—	—
Typhus fever,	1	1	—	—
Uræmia,	1	1	—	—
Total physical,	2,036	335	174	274
B. — Mental: —				
Change in environment,	1	—	—	—
Domestic and financial trouble,	1	—	—	—
Grief,	10	1	—	—
Overwork,	32	22	2	2
Shock, mental,	10	2	2	—
Worry and other causes,	78	17	17	7
Total mental,	132	42	21	9
Totals,	2,168	377	195	283
Unknown,	997	109	47	6
Not insane,	20	—	—	1
Totals,	3,185	486	242	290

TABLE 15. — *Duration of Mental Disease and its Treatment in Persons who recovered or died at Public Institutions for the Insane and McLean Hospital.*

PERIOD.	FIRST ADMITTED TO ANY HOSPITAL.						ALL OTHER ADMISSIONS.					
	DURATION BEFORE ADMISSION.			HOSPITAL RESIDENCE.			WHOLE DURATION.			WHOLE KNOWN PERIOD OF MENTAL DISEASE.		
	Men.	Women.	Totals.	Men.	Women.	Totals.	Men.	Women.	Totals.	Men.	Women.	Totals.
A. — Recovered: —												
Under 1 month,	82	38	120	24	8	32	15	—	15	1	—	1
From 1 to 3 months,	39	25	64	55	47	102	43	16	59	4	1	5
3 to 6 months,	13	28	41	37	30	67	41	23	64	8	3	11
6 to 12 months,	12	25	37	29	34	63	21	47	68	12	9	21
1 to 2 years,	6	8	14	17	11	28	19	28	47	12	21	33
2 to 5 years,	4	5	9	5	4	9	14	11	25	19	24	43
5 to 10 years,	—	2	2	—	3	3	3	6	9	3	1	4
10 to 20 years,	—	—	—	—	—	—	—	—	—	1	1	2
Over 20 years,	—	—	—	—	—	—	—	—	—	1	—	1
Totals,	156	131	287	167	137	304	156	131	287	61	60	121
Unknown,	11	6	17	—	—	—	11	6	17	12	6	18
Totals,	167	137	304	167	137	304	167	137	304	73	66	139
Average of known cases (in months),	3.29	7.20	5.07	5.66	7.33	6.41	9.04	14.99	11.76	28.93	25.89	27.42
										17.41	19.76	18.54

B. — Died:—

Congenital,	9	6	15	-	-	2	3	5	-	2	2	-	-	-	-
Under 1 month,	61	60	121	117	75	14	13	27	1	-	1	2	1	1	3
From 1 to 3 months,	82	62	144	79	54	39	26	65	2	1	3	5	1	1	6
3 to 6 months,	56	29	85	62	53	36	16	52	1	1	2	4	4	4	8
6 to 12 months,	86	42	131	84	58	54	30	84	2	4	6	14	8	8	22
1 to 2 years,	120	84	204	90	63	105	58	163	9	6	15	24	14	38	38
2 to 5 years,	100	115	215	91	103	149	118	267	26	17	43	18	24	42	42
5 to 10 years,	30	56	86	63	84	77	112	189	21	21	42	18	25	43	43
10 to 20 years,	17	33	50	47	65	52	65	117	16	22	38	24	35	59	59
Over 20 years,	14	27	41	32	37	47	76	123	32	34	66	22	16	38	38
Totals,	575	517	1,092	665	592	575	517	1,092	110	108	218	181	128	259	259
Unknown,	90	75	165	-	-	90	75	165	21	21	42	-	1	1	1
Totals,	665	592	1,257	665	592	665	592	1,257	131	129	260	131	129	260	260
Average of known cases (in months),	30.70	60.97	45.03	43.95	60.46	71.99	103.82	87.06	156.14	178.89	167.41	108.99	123.68	116.25	116.25

TABLE 16. — *Nativity and Parentage of Insane Persons admitted to Public Institutions for the Insane and McLean Hospital, who were received for the First Time at Any Hospital.*

PLACES OF NATIVITY.	1916.										THIRTEEN YEARS, 1904-16.		
	MEN.					WOMEN.					TOTALS.		
	FATHERS.		MOTHERS.		PATIENTS.	FATHERS.		MOTHERS.		PATIENTS.	FATHERS.	MOTHERS.	
	PATIENTS.	FATHERS.	PATIENTS.	MOTHERS.		PATIENTS.	FATHERS.	PATIENTS.	MOTHERS.				
Massachusetts,	705	260	277	229	577	218	478	1,282	506	13,269	5,455	5,592	
Other New England States,	156	155	159	115	134	119	274	290	274	3,398	3,327	3,315	
Other States,	115	80	87	60	93	62	142	208	147	2,090	1,461	1,538	
Total native,	976	495	523	404	804	399	894	1,780	927	18,757	10,243	10,445	
Other countries: —													
Africa,	—	—	—	—	—	—	—	—	—	7	8	6	
Albania,	1	—	—	—	—	—	—	1	—	6	3	3	
Argentine Republic,	—	—	—	—	—	—	—	—	—	1	—	—	
Armenia,	9	10	10	2	2	2	12	11	12	66	64	63	
Asia,	—	—	—	—	—	—	—	—	—	2	2	2	
At sea,	—	—	—	—	1	—	—	1	—	6	1	—	
Australia,	2	2	2	—	—	—	—	—	—	2	—	6	
Austria,	24	25	23	21	16	21	46	40	44	319	339	333	
Azores,	10	13	14	10	8	10	23	18	24	187	203	198	
Bahama Islands,	—	—	—	—	—	—	—	—	—	1	1	1	
Barbadoes Islands,	—	—	—	3	3	3	3	3	3	9	10	10	
Belgium,	2	2	2	2	2	2	4	4	4	23	22	22	
Bermuda,	—	—	—	—	—	—	—	—	—	1	—	3	
Bohemia,	—	1	1	1	1	1	2	1	2	9	9	9	
Brazil,	—	—	—	—	—	—	—	—	—	—	—	1	
Bulgaria,	—	—	—	—	—	—	—	—	—	—	—	2	
Canada,	144	215	208	143	131	144	359	275	351	3,315	3,751	3,883	
Cape Verde Islands,	10	13	11	—	10	—	13	10	11	51	55	50	
China,	4	3	3	—	—	—	3	5	3	43	41	42	
Denmark,	1	1	2	1	—	1	2	1	—	37	46	44	
East Indies,	—	—	—	—	—	—	—	—	—	3	2	—	
Egypt,	—	—	—	—	—	—	—	—	—	2	—	—	
England,	64	85	79	78	50	83	168	114	157	1,359	1,879	1,730	
Finland,	20	20	20	3	3	3	23	23	23	250	244	241	

France,	3	6	2	3	7	4	6	13	6	76	135	103
Germany,	15	26	25	24	43	41	39	69	66	486	823	771
Greece,	13	13	13	6	6	6	19	19	19	129	134	130
Iceland,	.	.	.	.	.	.	.	.	.	1	1	1
India,	.	.	.	.	.	.	.	.	.	7	1	4
Ireland,	158	379	375	224	402	408	382	781	783	5,033	9,508	9,496
Italy,	56	59	57	31	34	32	87	93	89	719	779	779
Japan,	1	1	1	1	1	1	1	1	1	11	11	11
Lithuania,	1	1	1	1	1	1	1	1	1	3	3	3
Macedonia,	1	1	1	1	1	1	1	1	1	6	6	6
Madeira Islands,	2	2	2	2	2	2	2	2	2	3	3	3
Malta, Isle of,	1	1	1	1	1	1	1	1	1	17	17	17
Mexico,	1	1	1	1	1	1	1	1	1	55	55	57
Netherlands,	1	1	1	1	1	1	1	1	1	68	68	68
New Brunswick,	3	2	3	2	2	2	5	4	5	—	—	1
New Zealand,	2	2	2	2	2	2	5	4	5	—	—	1
Newfoundland,	2	2	2	2	2	2	5	4	5	—	—	1
Norway,	6	9	7	3	5	4	5	6	11	85	80	96
Nova Scotia,	10	12	10	10	11	12	20	23	14	85	101	91
Poland,	10	12	12	2	2	3	12	14	22	136	122	130
Portugal,	6	7	7	2	2	3	7	9	15	190	190	185
Prince Edward Island,	6	7	7	11	10	8	17	9	9	72	82	75
Prussia,	—	—	—	—	—	—	—	17	15	38	38	38
Roumania,	2	1	1	—	—	—	2	1	—	—	2	7
Russia,	92	112	110	58	55	54	150	107	164	1,139	1,217	1,209
Sandwich Islands,	—	—	—	—	—	—	—	—	—	1	1	1
Scotland,	17	31	28	13	33	29	30	64	57	381	722	625
Sicily,	—	—	—	2	2	2	2	2	2	7	8	7
Society Islands,	—	—	—	—	—	—	—	—	—	1	1	1
South America,	—	—	—	—	—	—	—	—	—	7	4	2
Spain,	—	1	—	—	—	—	—	—	—	16	24	19
St. Helena,	—	—	—	—	—	—	—	1	—	—	—	1
Sweden,	28	33	34	24	32	30	52	65	64	539	622	612
Switzerland,	4	3	4	2	2	1	6	5	3	28	36	35
Syria,	2	2	2	1	1	1	3	3	5	46	42	41
Turkey,	12	10	9	1	1	1	13	11	10	100	95	96
Wales,	—	1	1	1	2	2	1	3	3	22	29	32
West Indies,	1	1	1	4	4	4	5	5	5	71	71	67
Total foreign,	746	1,129	1,096	645	933	920	1,391	2,062	2,016	15,237	21,689	21,416
Unknown,	9	107	112	5	122	130	14	229	242	306	2,368	2,439
Totals,	1,731	1,731	1,731	1,454	1,454	1,454	3,185	3,185	3,185	34,300	34,300	34,300

TABLE 17. — *Civil Condition of Insane Persons admitted to Public Institutions for the Insane and McLean Hospital who were received for the First Time at Any Hospital.*

CIVIL CONDITION.	1916.			THIRTEEN YEARS, 1904-16.		
	Men.	Women.	Totals.	Men.	Women.	Totals.
Unmarried,	788	563	1,351	8,540	6,187	14,727
Married,	709	580	1,289	7,530	6,371	13,901
Widowed,	199	284	483	1,927	3,011	4,938
Divorced,	20	26	46	215	250	465
Unknown,	15	1	16	201	68	269
Totals,	1,731	1,454	3,185	18,413	15,887	34,300

TABLE 18. — *Occupations of Insane Persons admitted to Public Institutions for the Insane and McLean Hospital who were received for the First Time at Any Hospital.*

OCCUPATIONS.	1916.			THIRTEEN YEARS, 1904-16.		
	Men.	Women.	Totals.	Men.	Women.	Totals.
Educated or professional, .	67	64	131	685	592	1,277
Domestic,	45	313	358	312	2,770	3,082
Farmers,	47	—	47	730	—	730
Housekeepers,	—	547	547	—	6,559	6,559
Laborers,	411	—	411	4,041	—	4,041
Mechanical,	398	26	424	3,949	87	4,036
Operatives,	166	95	261	1,656	1,080	2,736
Traders,	118	34	152	1,748	343	2,091
Miscellaneous,	294	81	375	2,992	906	3,898
Totals,	1,546	1,160	2,706	16,113	12,337	28,450
No occupation,	168	284	452	2,066	3,332	5,398
Unknown,	17	10	27	234	218	452
Totals,	1,731	1,454	3,185	18,413	15,887	34,300

TABLE 19. — *Relative to First Cases of Insanity in Public Institutions and McLean Hospital.*

FIRST CASES OF INSANITY — PERCENTAGES.																
INSTITUTIONS.				INSANE COMMITMENTS.			NATIVITY.									
				All.	First to Any Hospital.	PERCENTAGE OF FIRST CASES OF INSANITY.		PATIENTS.				MOTHERS, NATIVE.		FATHERS, NATIVE.		
						1916.	Average Two Years, 1915-16.	MASSACHUSETTS.		NATIVE.						
								1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.					
Worcester Hospital,	669	530	79.22	33.52	34.21	47.16	48.17	23.36	25.41	21.43	24.73
Taunton Hospital,	499	400	80.21	42.93	42.30	55.56	53.59	30.38	30.18	30.11	30.46
Northampton Hospital,	391	306	78.26	40.00	41.10	57.05	58.10	33.77	34.01	34.11	33.67
Danvers Hospital,	703	532	75.68	44.55	22.51	60.53	59.41	35.64	34.89	33.47	33.62
Westborough Hospital,	473	342	72.30	47.06	49.74	62.35	63.07	37.66	36.07	35.53	35.26
Boston Hospital,	868	688	79.26	43.57	40.83	59.65	56.14	29.07	27.78	28.96	27.08
Grafton Hospital, ¹	47	38	80.85	63.16	-	68.42	-	40.74	-	42.86	-
Medfield Hospital,	90	79	87.78	18.99	15.27	39.24	35.65	20.41	17.44	22.00	19.44
Monson Hospital,	14	13	92.86	92.31	85.18	92.31	87.62	66.67	45.18	61.54	48.72
Foxborough Hospital,	98	77	78.57	15.58	26.54	33.77	37.20	16.90	15.60	13.89	14.09
Mental Wards, State Infirmary,	37	31	83.78	16.67	13.01	36.67	34.47	25.00	20.57	18.52	14.26
Bridgewater Hospital,	95	73	76.84	15.07	19.02	36.99	36.07	15.07	13.62	13.70	13.61
Totals and averages, public,	3,984	3,109	78.04	40.16	39.87	55.51	54.66	30.29	29.54	29.18	28.90
McLean Hospital,	122	76	62.30	51.32	54.00	81.58	83.29	78.38	73.94	71.62	67.48
Totals and averages, public and McLean,	4,106	3,185	77.57	40.43	40.17	56.13	55.27	31.50	30.55	30.24	29.78

¹ Commitments received for the first time in 1916.

TABLE 19. — *Relative to First Cases of Insanity in Public Institutions and McLean Hospital* — Continued.

FIRST CASES OF INSANITY — PERCENTAGES — CON.												
INSTITUTIONS.	COMMITTED FROM —				AGE.				DURATION PRIOR TO COMMITMENT.			
	CITIES AND TOWNS OVER 10,000, 79.53 PER CENT. OF STATE POPULATION.		COUNTRY DIS- TRICTS, 20.47 PER CENT. OF STATE POPULATION.		60 YEARS OR OVER.		AVERAGE AGE.		1 YEAR OR MORE.		UNDER 1 YEAR.	
	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.	1916.	
Worcester Hospital,	86.04	81.34	13.96	18.66	23.26	23.24	44.56	44.45	43.50	46.17	56.50	53.83
Taunton Hospital,	62.00	62.88	38.00	37.12	24.62	22.74	44.02	47.66	38.48	37.42	61.52	62.58
Northampton Hospital,	60.46	67.36	39.54	32.64	21.31	18.91	43.10	42.95	42.57	43.55	57.43	56.45
Danvers Hospital,	85.34	85.33	14.66	14.67	20.68	20.09	43.65	43.26	42.60	38.67	57.40	61.33
Westborough Hospital,	71.64	67.97	28.36	32.03	21.70	21.37	44.37	44.25	46.74	48.66	53.26	51.34
Boston Hospital,	97.82	96.09	2.18	3.91	19.65	18.36	42.50	42.85	36.08	39.45	63.92	60.55
Grafton Hospital, ¹	100.00	—	—	—	2.63	—	34.00	—	90.91	—	9.09	—
Medfield Hospital,	96.20	95.60	3.80	4.40	18.99	15.12	40.87	40.27	36.73	44.76	63.27	55.24
Monson Hospital,	61.54	73.63	38.46	26.37	7.69	3.85	27.85	24.93	—	—	100.00	100.00
Foxborough Hospital,	90.91	93.90	9.09	6.10	10.39	8.32	37.37	37.49	60.00	62.82	40.00	37.18
Mental Wards, State Infirmary,	87.10	90.33	12.90	9.67	16.13	24.20	38.52	42.93	36.67	45.76	63.33	54.24
Bridgewater Hospital,	73.97	78.88	26.03	21.12	1.37	3.47	34.16	34.09	80.95	77.21	19.05	22.79
Totals and averages, public,	81.51	81.72	18.49	18.28	20.49	19.42	42.93	43.32	41.92	42.46	58.08	57.54
McLean Hospital,	68.42	78.38	31.58	21.62	19.74	19.87	46.24	46.16	39.47	33.07	60.53	66.93
Totals and averages, public and McLean,	81.19	81.62	18.81	18.38	20.47	19.42	43.01	43.38	41.85	42.24	58.15	57.76

¹ Commitments received for the first time in 1916.

TABLE 19. — *Relative to First Cases of Insanity in Public Institutions and McLean Hospital — Continued.*

INSTITUTIONS.	FIRST CASES OF INSANITY — PERCENTAGES — CON.									
	DURATION PRIOR TO COMMITMENT — CON.				CAUSES ASSIGNED BY HOSPITAL PHYSICIANS.					
	UNDER 6 MONTHS.		UNDER 3 MONTHS.		CONGENITAL.		HEREDITY.		HEREDITY AND OTHER CAUSES.	
	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.
Worcester Hospital,	47.53	44.12	37.44	33.40	22.08	20.83	6.04	7.10	5.28	7.39
Taunton Hospital,	55.05	55.98	46.62	47.01	6.25	5.24	11.75	11.57	7.25	7.59
Northampton Hospital,	42.57	44.12	36.49	34.85	16.34	16.42	13.40	14.46	5.56	3.27
Danvers Hospital,	44.77	51.62	32.74	35.27	7.71	7.74	9.02	8.18	5.26	3.47
Westborough Hospital,	44.93	41.97	35.87	33.00	1.75	2.92	—	—	12.28	12.26
Boston Hospital,	51.79	48.53	39.81	36.70	2.18	2.33	—	—	12.50	14.54
Grafton Hospital, ¹	9.09	—	—	—	—	—	—	—	23.63	—
Medfield Hospital,	42.86	42.27	32.65	31.61	12.66	11.96	—	—	32.91	25.83
Monson Hospital,	100.00	100.00	100.00	100.00	—	—	—	—	61.54	53.39
Foxborough Hospital,	29.23	30.24	23.08	24.04	11.69	5.85	9.09	17.05	41.56	36.40
Mental Wards, State Infirmary,	36.67	23.18	3.33	6.51	6.45	3.23	—	—	6.45	9.68
Bridgewater Hospital,	11.90	14.12	4.76	4.42	12.33	12.92	—	—	17.81	19.72
Totals and averages, public,	47.44	46.63	36.91	35.96	9.13	8.31	5.63	5.46	10.29	10.70
McLean Hospital,	47.37	54.52	34.21	40.44	—	—	—	—	51.32	40.66
Totals and averages, public and McLean,	47.44	46.81	36.83	36.05	8.92	8.13	5.49	5.84	11.27	11.37
									16.76	16.71

¹ Commitments received for the first time in 1916.

TABLE 19. — *Relative to First Cases of Insanity in Public Institutions and McLean Hospital — Continued.*

INSTITUTIONS.	FIRST CASES OF INSANITY — PERCENTAGES — CON.									
	CAUSES ASSIGNED BY HOSPITAL PHYSICIANS — CON.									
	SENILITY.		COARSE BRAIN LESIONS.		ALCOHOLIC INTemperance.		ALCOHOLIC IN-TEMPERANCE AND OTHER CAUSES.		TOTAL ALCOHOLIC INTemperance.	
	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.
Worcester Hospital,	14.53	13.65	14.91	11.13	12.08	9.85	10.57	10.17	22.65	20.02
Taunton Hospital,	12.25	11.42	4.00	4.38	10.25	11.34	3.50	4.14	13.75	15.48
Northampton Hospital,	10.46	10.18	9.15	8.54	15.69	18.74	4.58	4.27	20.37	23.01
Danvers Hospital,	5.45	4.61	11.09	13.09	14.85	14.35	1.88	2.82	16.73	17.17
Westborough Hospital,	9.94	9.90	5.56	5.16	8.19	6.48	—	0.17	8.19	6.65
Boston Hospital,	16.57	15.18	18.02	9.41	12.79	12.55	3.78	3.62	16.57	16.17
Grafton Hospital, ¹	2.63	—	—	—	—	—	21.05	—	21.05	—
Medfield Hospital,	15.19	9.47	2.53	5.64	3.80	15.03	—	6.87	3.80	21.90
Monson Hospital,	—	—	—	—	—	3.57	—	—	—	3.57
Foxborough Hospital,	6.49	6.37	3.90	1.95	10.39	20.82	1.30	0.65	11.69	21.47
Mental Wards, State Infirmary,	10.35	25.81	—	1.62	9.63	11.29	—	1.62	9.63	12.91
Bridgewater Hospital,	—	1.35	—	1.35	31.51	27.24	6.85	6.13	38.36	33.37
Totals and averages, public,	11.55	10.96	10.61	8.10	12.38	12.67	4.31	4.36	16.69	17.03
McLean Hospital,	1.32	0.66	10.53	13.60	3.95	1.97	3.95	2.81	7.90	4.78
Totals and averages, public and McLean,	11.30	10.74	10.61	8.22	12.18	12.45	4.30	4.32	16.48	16.77
									9.70	9.65
									10.53	11.10
									9.70	9.68

¹ Commitments received for the first time in 1916.

TABLE 19. — *Relative to First Cases of Insanity in Public Institutions and McLean Hospital* — Continued.

FIRST CASES OF INSANITY — PERCENTAGES — CON.											
FORMS OF MENTAL DISEASE.											
PERSONS TO FIRST CASES.											
INSTITUTIONS.	CURABLE.			GENERALLY INCURABLE.				RECOVERIES TO FIRST RECOVERIES, GENERALLY IN-CURABLE.			
	A.			B.		C.		B and C.		A.	
	1916.	Average Two Years, 1915-16.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.
Worcester Hospital,	15.85	15.94	41.89	43.77	39.62	38.29	82.06	90.91	86.37	4.55	5.31
Taunton Hospital,	4.25	9.01	54.25	49.35	36.25	35.06	84.40	53.85	74.80	46.15	25.21
Northampton Hospital,	31.05	28.73	38.24	37.93	29.08	30.71	68.64	95.35	87.33	4.65	10.95
Danvers Hospital,	22.93	24.08	34.59	32.81	40.04	40.46	73.27	93.94	86.97	6.06	13.03
Westborough Hospital,	19.01	21.24	34.21	33.09	29.82	30.73	63.82	58.14	64.07	32.56	30.28
Boston Hospital,	20.49	22.00	30.96	31.60	33.87	32.71	64.31	84.27	82.61	10.11	12.20
Grafton Hospital, ¹	-	-	-	-	100.00	-	-	100.00	-	-	-
Medfield Hospital,	7.59	9.42	49.37	52.10	41.77	37.14	89.32	66.67	83.34	33.33	16.67
Monson Hospital,	-	-	-	-	100.00	100.00	100.00	-	-	-	-
Foxborough Hospital,	6.49	9.50	58.44	63.60	35.06	26.91	90.50	100.00	50.00	-	-
Mental Wards, State Infirmary,	6.45	3.23	45.16	37.10	48.39	59.68	96.78	100.00	100.00	-	-
Bridgewater Hospital,	15.07	12.94	68.49	62.45	9.59	14.93	76.88	100.00	71.43	-	7.15
Totals and averages, public,	17.63	19.25	39.18	37.94	36.18	35.57	73.51	81.56	81.11	14.89	14.79
McLean Hospital,	53.95	53.64	9.21	10.44	21.05	23.86	34.30	90.91	87.12	-	-
Totals and averages, public and McLean,	18.49	19.99	38.46	37.34	35.82	35.21	72.65	82.24	81.50	13.82	13.96

¹ Commitments received for the first time in 1916.

TABLE 19. — *Relative to First Cases of Insanity in Public Institutions and McLean Hospital* — Continued.

INSTITUTIONS.	FIRST CASES OF INSANITY — PERCENTAGES — CON.							
	FORMS OF MENTAL DISEASE — CON.							
	MANIC-DEPRESSIVE INSANITY.		ACUTE ALCOHOLIC INSANITY.		CHRONIC ALCOHOLIC INSANITY.		DEMENTIA PRECOX.	
	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.
Worcester Hospital,	7.55	8.13	5.47	5.18	3.77	2.97	34.91	36.48
Taunton Hospital,	2.50	2.97	0.75	2.10	2.75	2.96	39.00	37.10
Northampton Hospital,	14.38	15.94	10.13	8.04	5.23	7.07	22.55	22.17
Danvers Hospital,	11.84	13.47	7.33	6.60	5.45	5.45	25.38	22.86
Westborough Hospital,	13.45	13.70	2.63	3.19	1.46	0.90	30.12	28.50
Boston Hospital,	12.21	13.25	4.22	5.19	5.96	5.12	18.75	19.25
Grafton Hospital, ¹	—	—	—	—	—	—	—	—
Medfield Hospital,	6.33	5.67	1.27	0.64	—	5.63	41.77	41.51
Monson Hospital,	—	—	—	—	—	—	—	—
Foxborough Hospital,	2.60	5.99	3.90	6.64	6.49	9.50	46.75	48.38
Mental Wards, State Infirmary,	6.45	3.23	—	—	9.68	11.29	35.48	24.19
Bridgewater Hospital,	9.59	6.15	2.74	4.75	15.07	12.27	52.05	47.65
Totals and averages, public,	9.75	10.77	4.70	4.91	4.54	4.56	28.79	27.34
McLean Hospital,	50.00	50.84	2.63	1.32	—	—	5.26	6.80
Totals and averages, public and McLean,	10.71	11.47	4.65	4.84	4.43	4.96	28.23	26.89
							8.76	8.50

¹ Commitments received for the first time in 1916.

TABLE 19. — *Relative to First Cases of Insanity in Public Institutions and McLean Hospital — Concluded.*

INSTITUTIONS.	FIRST CASES OF INSANITY — PERCENTAGES — CON.							
	COARSE BRAIN LESIONS.				FORMS OF MENTAL DISEASE — CON.			
	COARSE BRAIN LESIONS.		EPILEPTIC INSANITY.		IMBECILITY.		SENILE INSANITY.	
	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.	1916.	Average Two Years, 1915-16.
Worcester Hospital,	10.57	9.50	0.94	1.15	4.91	5.31	11.51	12.82
Taunton Hospital,	6.25	7.23	2.75	2.57	7.25	5.74	12.75	12.33
Northampton Hospital,	9.80	9.03	1.31	1.48	1.63	4.94	10.13	9.85
Danvers Hospital,	14.47	13.00	3.20	2.55	6.39	6.45	4.70	6.23
Westborough Hospital,	6.73	6.43	1.17	1.61	3.80	4.96	10.82	10.68
Boston Hospital,	11.19	10.71	1.16	1.38	1.02	2.60	7.41	6.88
Grafton Hospital, ¹	—	—	71.05	—	18.42	—	—	—
Medfield Hospital,	2.53	1.27	—	—	12.66	11.96	18.99	17.00
Monson Hospital,	—	—	100.00	100.00	—	—	—	—
Foxborough Hospital,	5.19	2.60	1.30	2.22	15.58	10.92	6.49	6.37
Mental Wards, State Infirmary,	6.45	6.45	3.23	3.23	6.45	8.07	19.35	25.81
Bridgewater Hospital,	—	2.71	1.37	0.69	4.11	7.46	—	0.68
Totals and averages, public,	9.52	9.12	2.96	3.01	4.76	5.22	9.07	9.12
McLean Hospital,	10.53	11.93	—	—	—	—	1.32	1.50
Totals and averages, public and McLean,	9.54	9.17	2.89	2.94	4.65	5.11	8.89	8.96

¹ Commitments received for the first time in 1916.

TABLE 20. — *Relative to Recoveries of the Insane in Public Institutions and McLean Hospital.*

INSTITUTIONS.		Number.	PERCENTAGE OF ALL RECOVERIES OF INSANE ON —										FIRST CASES OF INSANITY.	
			COMMITMENTS.			WHOLE NUMBER OF PERSONS.			DAILY AVERAGE NUMBER.		RECOVERIES.			
			1916.	Average Five Years, 1912-16.	1916.	Average Five Years, 1912-16.	1916.	Average Five Years, 1912-16.	1916.	Average Five Years, 1912-16.	Number.	1916.	Average Five Years, 1912-16.	
Worcester Hospital,	29	4.33	11.63	1.35	3.25	1.93	4.48	4.15	10.75					
Taunton Hospital,	36	7.21	8.27	1.95	2.54	2.69	3.70	6.50	8.40					
Northampton Hospital,	61	15.60	12.72	4.42	3.61	6.31	5.09	14.05	11.97					
Danvers Hospital,	50	7.11	9.37	2.21	2.64	3.29	3.75	6.20	8.86					
Westborough Hospital,	74	15.64	16.62	4.22	4.59	7.76	6.52	12.57	15.68					
Boston Hospital,	122	14.06	13.56	4.98	5.62	7.76	9.46	12.94	11.93					
Grafton Hospital,	4	8.51	1.70	0.21	0.09	0.24	0.10	5.26	1.05					
Medford Hospital,	8	8.89	2.51	0.43	0.16	0.49	0.19	7.59	2.27					
Gardner Colony,	1	—	—	0.12	0.05	0.13	0.06	—	—					
Monson Hospital,	6	—	—	—	0.55	1.83	0.73	6.49	1.30					
Foxborough Hospital,	3	8.11	2.10	0.35	0.09	0.43	0.12	9.68	2.58					
Mental Wards, State Infirmary,	12	12.63	18.83	1.30	2.00	1.45	2.21	13.70	17.52					
Bridgewater Hospital,														
Totals and averages, public,	406	10.19	11.86	2.23	2.58	2.81	3.27	9.07	10.91					
McLean Hospital,	38	31.15	32.04	11.34	11.48	18.34	18.44	28.95	26.26					
Totals and averages, public and McLean,	444	11.14	12.56	2.40	2.77	3.02	3.52	9.54	11.31					

TABLE 20. — *Relative to Recoveries of the Insane in Public Institutions and McLean Hospital* — Concluded.

FIRST CASES OF INSANITY — CON.										
INSTITUTIONS.	Num-ber.	CURABLE CASES — GROUP A.				MANIC-DEPRESSIVE INSANITY.			ACUTE ALCOHOLIC INSANITY.	
		PERCENTAGE OF FIRST CASES.		Num-ber.	PERCENTAGE OF FIRST CASES.		Num-ber.	PERCENTAGE OF FIRST CASES.		
		1916.	Average Two Years, 1915-16.		1916.	Average Two Years, 1915-16.		1916.	Average Two Years, 1915-16.	
Worcester Hospital,	84	15.85	15.94	20	23.81	7.55	8.13	40	5.47	5.18
Taunton Hospital,	17	4.25	9.01	14	82.35	2.50	2.97	10	0.75	2.10
Northampton Hospital,	95	31.05	28.73	41	43.16	14.38	15.94	44	10.13	8.04
Danvers Hospital,	122	22.93	24.68	31	25.41	11.84	13.47	63	7.33	6.60
Westborough Hospital,	65	19.01	21.24	25	38.46	13.45	13.70	46	2.63	3.19
Boston Hospital,	141	20.49	22.00	75	53.19	12.21	13.25	84	4.22	5.19
Grafton Hospital,	6	7.59	9.42	2	66.67	6.33	5.67	5	1.27	0.64
Medfield Hospital,	—	—	—	4	—	—	—	—	—	—
Gardner Colony,	—	—	—	—	—	—	—	—	—	—
Monson Hospital,	5	6.49	9.50	5	100.00	2.60	5.99	2	3.90	6.64
Foxborough Hospital,	22	6.45	3.23	3 ²	—	6.45	3.23	2	—	—
Mental Wards, State Infirmary,	11	15.07	12.94	10	90.91	9.59	6.15	7	2.74	4.75
Bridgewater Hospital,	—	—	—	—	—	—	—	—	—	—
Totals and averages, public,	548	17.63	19.25	230	41.97	9.75	10.77	303	4.70	4.91
McLean Hospital,	41	53.95	53.64	20	48.78	50.00	50.84	38	2.63	1.32
Totals and averages, public and McLean,	589	18.49	19.99	250	42.44	10.71	11.47	341	4.65	4.84

¹ Commitments received for the first time in 1916.² Recoveries numbered 3 and admissions 2. Percentage not figured.

TABLE 21. — *Relative to Deaths of the Insane in Public Institutions and McLean Hospital.*

INSTITUTIONS.	Number of Deaths.	PERCENTAGE OF DEATHS ON —					
		WHOLE NUMBER OF PERSONS.		DAILY AVERAGE NUMBER.		DISCHARGES AND DEATHS.	
		1916.	Average Three Years, 1914-16.	1916.	Average Three Years, 1914-16.	1916.	Average Three Years, 1914-16.
Worcester Hospital,	225	10.49	8.29	15.01	11.53	44.64	35.64
Taunton Hospital,	170	9.20	10.19	12.71	14.60	48.57	46.42
Northampton Hospital,	107	7.75	7.66	11.06	10.85	36.52	37.72
Danvers Hospital,	211	9.34	8.87	13.86	12.83	39.07	39.26
Westborough Hospital,	139	7.92	7.32	10.84	10.31	38.83	34.08
Boston Hospital,	229	9.35	8.66	14.56	14.55	31.16	26.32
Grafton Hospital,	119	6.13	5.44	7.13	6.27	80.95	83.00
Medfield Hospital,	93	5.05	5.55	5.66	6.10	73.23	81.14
Gardner Colony,	13	1.54	1.32	1.67	1.44	46.43	46.19
Monson Hospital,	32	8.29	7.94	9.32	9.39	66.67	76.12
Foxborough Hospital,	43	9.53	7.47	13.12	9.68	50.59	61.21
Mental Wards, State Infirmary,	91	10.53	8.27	12.94	9.83	73.98	71.01
Bridgewater Hospital,	24	2.61	2.80	2.90	3.09	38.71	35.39
Totals and averages, public,	1,496	8.22	7.64	10.34	9.69	44.00	40.28
McLean Hospital,	21	6.27	5.27	10.14	8.27	18.42	16.11
Totals and averages, public and McLean,	1,517	8.20	7.61	10.33	9.67	43.17	39.52

TABLE 21. — *Relative to Deaths of the Insane in Public Institutions and McLean Hospital* — Continued.

INSTITUTIONS.		PERCENTAGE OF PERSONS WHO DIED AFFECTED WITH CERTAIN MENTAL DISEASES.						
		Curable Forms (Group A).	Average Two Years, 1915-16.	Senile Insanity.	Average Two Years, 1915-16.	General Paralysis.	Average Two Years, 1915-16.	Coarse Brain Lesions.
Worcester Hospital,	.	5.33	4.56	29.33	29.06	28.89	23.92	25.78
Taunton Hospital,	.	4.71	3.86	30.59	29.15	21.18	18.74	15.88
Northampton Hospital,	.	11.21	13.30	29.91	28.90	18.69	16.08	31.78
Danvers Hospital,	.	13.27	13.38	13.27	15.38	31.28	26.57	42.18
Westborough Hospital,	.	11.51	10.62	27.34	26.06	19.42	18.56	17.99
Boston Hospital,	.	11.35	8.88	23.14	20.69	33.62	28.14	35.37
Grafton Hospital,	.	5.04	4.19	-	2.78	2.52	4.04	-
Medfield Hospital,	.	9.68	9.94	16.13	13.17	6.45	4.25	2.15
Gardner Colony,	.	15.38	14.84	-	-	-	-	-
Monson Hospital,	.	-	-	-	-	-	-	-
Foxborough Hospital,	.	4.65	11.59	11.63	16.93	18.60	13.01	9.30
Mental Wards, State Infirmary,	.	-	3.97	6.59	16.79	5.49	5.13	2.20
Bridgewater Hospital,	.	8.33	4.17	-	4.76	12.50	13.40	-
Totals and averages, public,	.	8.22	8.85	19.72	19.98	21.12	18.13	21.52
McLean Hospital,	.	33.33	33.33	4.76	2.38	38.10	39.05	33.10
Totals and averages, public and McLean,	.	8.57	9.16	19.51	19.75	21.36	18.40	21.75

19.14
22.39
19.19

TABLE 21. — *Relative to Deaths of the Insane in Public Institutions and McLean Hospital — Concluded.*

INSTITUTIONS.	PERCENTAGE OF PERSONS WHO DIED AFFECTED WITH CERTAIN PHYSICAL DISEASES.									
	Tuber- culosis.	Average Two Years, 1915-16.	Pneu- monia.	Average Two Years, 1915-16.	Organic Cardiac Disease.	Average Two Years, 1915-16.	Organic Renal Disease.	Average Two Years, 1915-16.	Malignant Tumors.	Average Two Years, 1915-16.
Worcester Hospital,	5.33	7.21	25.78	22.74	17.33	14.73	1.33	1.80	4.89	3.58
Taunton Hospital,	10.59	11.62	24.12	28.03	25.88	22.88	1.76	2.39	1.18	0.59
Northampton Hospital,	0.93	2.87	13.08	9.43	9.35	6.12	1.87	1.85	3.74	3.80
Danvers Hospital,	6.63	7.42	18.01	19.66	12.32	15.73	6.64	7.15	0.95	1.02
Westborough Hospital,	2.88	4.54	8.63	17.59	10.79	12.03	6.47	5.01	2.88	2.77
Boston Hospital,	10.04	7.98	11.35	13.07	13.97	12.41	1.75	3.34	1.31	2.63
Grafton Hospital,	26.05	27.47	13.45	11.73	16.81	16.19	2.52	2.93	2.52	4.60
Medfield Hospital,	22.58	19.46	24.73	22.06	15.05	18.24	5.38	3.20	-	1.02
Gardner Colony,	15.38	7.69	15.38	7.69	30.77	58.24	15.38	7.69	7.69	3.85
Monson Hospital,	15.63	18.16	18.75	14.55	-	1.73	9.38	8.14	-	-
Foxborough Hospital,	18.60	13.01	11.63	10.08	13.95	12.53	13.95	10.68	4.65	4.18
Mental Wards, State Infirmary,	21.98	17.34	20.88	16.79	19.78	17.04	2.20	5.86	1.10	1.35
Bridgewater Hospital,	37.50	28.28	8.33	16.07	4.17	4.47	-	2.38	4.17	2.09
Totals and averages, public,	11.23	11.04	17.51	18.18	15.31	14.90	3.74	4.02	2.27	2.35
McLean Hospital,	-	-	28.57	14.29	14.29	13.81	-	-	-	-
Totals and averages, public and McLean,	11.07	10.89	17.67	18.15	15.29	14.88	3.69	3.97	2.24	2.32

MEMBERS OF THE STATE BOARD OF INSANITY.

Date of Original Appointment.	NAME.	Residence.	Term expires.	RETIRED.	
				Date.	Reason.
September, 1898, .	<i>George F. Jelly, M.D.,</i>	Boston, .	—	December, 1910	Resigned.
September, 1898, .	<i>Herbert B. Howard, M.D.,¹</i>	Boston, .	—	January, 1902	Resigned.
September, 1898, .	<i>Charles R. Codman,</i>	Barnstable, .	—	September, 1906	Term expired.
September, 1898, .	<i>Edward S. Bradford,</i>	Springfield, .	—	February, 1900	Resigned.
September, 1898, .	<i>Francis B. Gardner,</i>	Brockton, .	—	February, 1902	Resigned.
February, 1900, .	<i>Albert L. Harwood, .</i>	Newton Center, .	—	September, 1905	Term expired.
January, 1902, .	<i>James B. Ayer, M.D.,</i>	Boston, .	—	September, 1907	Term expired.
December, 1902, .	<i>Seward W. Jones, .</i>	Newton Highlands, .	—	December, 1906	Resigned.
September, 1905, .	<i>Michael J. O'Meara, M.D.,²</i>	Worcester, .	—	July, 1914	Term expired.
October, 1906, .	<i>Henry P. Field,</i>	Northampton, .	—	December, 1912	Term expired.
January, 1907, .	<i>William F. Whittemore,</i>	Boston, .	—	December, 1913	Resigned.
September, 1907, .	<i>Herbert B. Howard, M.D.,</i>	Boston, .	—	March, 1913	Term expired.
December, 1910, .	<i>Edward W. Taylor, M.D.,</i>	Boston, .	—	November, 1913	Term expired.
December, 1912, .	<i>John Whiting Mason,</i>	Northampton, .	—	July, 1914	Term expired.
March, 1913, .	<i>L. Vernon Briggs, M.D.,²</i>	Boston, .	—	July, 1914	Term expired.
November, 1913, .	<i>James M. W. Hall,</i>	Newton, .	—	July, 1914	Term expired.
January, 1914, .	<i>Roger Wolcott,</i>	Milton, .	—	July, 1914	Term expired.
August, 1914, .	<i>Michael J. O'Meara, M.D.,</i>	Worcester, .	—	July, 1914	Term expired.
August, 1914, .	<i>L. Vernon Briggs, M.D.,</i>	Boston, .	—	August, 1916	Term expired.
August, 1914, .	<i>Chas. E. Ward,³</i>	Buckland, .	—	August, 1916	Term expired.

¹ Reappointed September, 1907.² Reappointed August, 1914.³ Reappointed Nov. 3, 1915.

MEMBERS OF THE MASSACHUSETTS COMMISSION ON MENTAL DISEASES.

Date of Original Appointment.	NAME.	Residence.	Term expires.	RETIRED.	
				Date.	Reason.
August, 1916,	George M. Kline, M.D.,	Beverly, .	August, 1921	-	-
August, 1916,	John B. Tivnan, .	Salem, .	August, 1920	-	-
August, 1916,	Henry M. Pollock, M.D.,	Boston, .	August, 1919	-	-
August, 1916,	Charles G. Dewey, M.D.,	Boston, .	August, 1918	-	-
August, 1916,	Elmer A. Stevens, .	Somerville, .	August, 1917	-	-

DIRECTORY OF INSTITUTIONS.

PUBLIC.

WORCESTER STATE HOSPITAL (opened 1833): —

Trustees: Miss Georgie A. Bacon, Worcester, chairman; Donald Gordon, Boston, clerk; Mrs. Ellen A. Sheehan, Worcester; Amos B. Chase, Lynn; William J. Delahanty, M.D., Worcester; John G. Perman, D.D., Worcester.

Regular meeting, first Tuesday of each month.

Superintendent and treasurer, Ernest V. Scribner, M.D.

Senior assistant physician, B. Henry Mason, M.D.

Assistant physicians, Harold C. Arey, M.D., R. Grant Barry, M.D., Jennie G. McIntosh, M.D., Donald R. Gilfillan, M.D., Lillian L. MacPhee, M.D.

Pathologist, Harold I. Gosline, M.D.

Steward, Arthur E. Gilman.

Visiting days, daily, 10 A.M. to 12 M., and 1 to 4 P.M.

Staff meetings, daily, 8.30 A.M.

Location, Belmont Street, Worcester, one and one-half miles from Union Station (Boston & Albany, New York, New Haven & Hartford and Boston & Maine).

TAUNTON STATE HOSPITAL (opened 1854): —

Trustees: Charles C. Cain, Jr., Taunton, chairman; Mrs. Elizabeth C. M. Gifford, East Boston, secretary; Simeon Borden, Fall River; Arthur B. Reed, North Abington; Joseph C. Desmond, New Bedford; Mrs. Margaret C. Smith, Taunton; Philip E. Brady, Attleboro.

Regular meeting, second Thursday of each month.

Superintendent, Arthur V. Goss, M.D.

Assistant superintendent, Horace G. Ripley, M.D.

Clinical director and pathologist, A. Myerson, M.D.

Senior assistant physicians, John F. O'Brien, M.D., John J. Thompson, M.D.

Assistant physician, Charles E. Roderick, M.D.

Junior assistant physicians, Fannie C. Haines, M.D., Beatrice A. Reed, M.D., Thomas J. O'Brien, M.D.

TAUNTON STATE HOSPITAL (opened 1854) — *Concluded.*

Treasurer, Frank W. Boynton.

Steward, Stephen F. Tracy.

Visiting days, every day.

Staff meetings, Monday, Tuesday, Thursday, Friday and Saturday, at 8.15 A.M.

Location, Hodges Avenue, Taunton, one mile from railroad station (New York, New Haven & Hartford).

NORTHAMPTON STATE HOSPITAL (opened 1858): —

Trustees: Henry L. Williams, Northampton, chairman; Joseph W. Stevens, Greenfield, secretary; Miss Caroline A. Yale, Northampton; Luke Corcoran, M.D., Springfield; John McQuaid, Pittsfield; Charles S. Shattuck, Hatfield; Mrs. Emily N. Newton, Holyoke.

Regular meeting, first Thursday of each month.

Superintendent, John A. Houston, M.D.

Assistant physicians, Edward C. Greene, M.D., B. Angela Bober, M.D., Arthur Nelson Ball, M.D., Harriet M. Whitney, M.D., Eliza Kilpatrick, M.D.

Treasurer and steward, Lewis F. Babbitt.

Visiting days, for relatives or friends, every day; for the general public, every day except Sunday.

Staff meetings, daily, except Sundays, at 8.15 A.M.

Location, Prince Street ("Hospital Hill"), Northampton, one and one-half miles from the railroad station, reached by carriage (Massachusetts Central and Connecticut River branches of Boston & Maine).

DANVERS STATE HOSPITAL (opened 1878): —

Post office and railroad station, Hathorne (Boston & Maine).

Trustees: S. Herbert Wilkins, Salem, chairman; Samuel Cole, Beverly, secretary; Miss Mary W. Nichols, Danvers; Seward W. Jones, Newton Highlands; Ernest B. Dane, Brookline; Miss Annie M. Kilham, Beverly; Francis H. Caskin, Jr., Danvers.

Regular meeting, second Friday of each month.

Superintendent, John B. Macdonald, M.D.

Assistant physicians, Nelson G. Trueman, M.D., Alice M. Patterson, M.D., David T. Brewster, M.D., Alfred P. Chronquest, M.D., William J. Thompson, M.D.

Pathologist, Lawson G. Lowrey, M.D.

DANVERS STATE HOSPITAL (opened 1878) — *Concluded.*

Treasurer, Horace M. Brown.

Steward,

Visiting days, every day.

Staff meetings, daily, at 8 A.M.

Location, Maple and Newbury Streets, Danvers, one-quarter mile from railroad station.

WESTBOROUGH STATE HOSPITAL (opened 1886): —

Trustees: N. Emmons Paine, M.D., West Newton, chairman; Miss Flora L. Mason, Taunton, secretary; Walter F. Mahoney, M.D., Westborough; John J. Shaughnessey, Marlborough; Thomas F. Dolan, Newton; Sewall C. Brackett, Boston; Mrs. Emily Young O'Brien, Brookline.

Regular meeting, first Thursday of each month.

Superintendent, Harry O. Spalding, M.D.

Assistant superintendent, M. M. Jordan, M.D.

Senior assistant physicians, H. B. Ballou, M.D., W. A. Jillson, M.D.

Assistant physicians, Alice S. Cutler, M.D., Emma H. Fay, M.D., M. J. Shealey, M.D., Ralph M. Chambers, M.D., James A. Gould, M.D.

Pathologist and Director of Clinical Psychiatry, Solomon C. Fuller, M.D.

Steward, Melville L. Stacy.

Treasurer, Mabel J. Goddard.

Visiting days, every week day; Sundays, by obtaining written permission.

Staff meetings, daily, at 11.30 A.M.

Location, two and one-quarter miles from Westborough station (Boston & Albany); one mile from Talbot station (New York, New Haven & Hartford).

BOSTON STATE HOSPITAL (opened 1839): —

Post office, Dorchester Center; railroad station, Forest Hills (New York, New Haven & Hartford).

Trustees: Henry Lefavour, Boston, chairman; Hon. Melvin S. Nash, Hanover, secretary; Mrs. Katherine G. Devine, South Boston; Lehman Pickert, Brookline; Mrs. Helen B. Hopkins, Boston; John A. Kiggen, Hyde Park; John F. Fennessey, M.D., Dorchester.

Regular meeting, second Tuesday of each month.

BOSTON STATE HOSPITAL (opened 1839) — *Concluded.*

Superintendent, Henry P. Frost, M.D.

Assistant superintendent, Samuel W. Crittenden, M.D.

Senior assistant physician, Ermy C. Noble, M.D.

Assistant physicians: Mary E. Gill-Noble, M.D., William M. Dobson, M.D., Edmund M. Pease, M.D., Geneva Tryon, M.D., Heman L. Chase, M.D., William T. Ramage, M.D.

Pathologist, Mary E. Morse, M.D.

Steward, William E. Elton.

Treasurer, Fred L. Brown.

Location: East Group, Harvard Street, Dorchester, near Blue Hill Avenue; West Group, Walk Hill Street, about one-half mile from Blue Hill Avenue, one and one-half miles from railroad station: Psychopathic Department, 74 Fenwood Road, corner of Brookline Avenue.

Visiting days, 2 to 4 P.M. daily.

Psychopathic Department (opened 1912): —

Post office, 74 Fenwood Road, Boston.

Director, Elmer E. Southard, M.D.

Administrator, Elisha H. Cohoon, M.D.

Senior Assistant physicians, Arthur P. Noyes, M.D., Clarence G. Rounsefell, M.D.

Executive assistant, Anna C. Wellington, M.D.

Assistant physicians, James T. Adams, M.D., Christina M. Leonard, M.D.

Assistant physicians, out-patient service, A. Warren Stearns, M.D., Charles E. Sandoz, M.D., Donald Gregg, M.D.

Psychologist, Robert M. Yerkes, Ph.D.

Assistant psychologist, Josephine M. Curtis, Ph.D.

Assistant in psychology, Francis J. O'Brien, Ph.D.

Internes in psychology, Sidney L. Pressey, Bruce B. Robinson.

Internes, Thomas J. O'Brien, M.D., John H. Arnett, M.D., George W. Davies, M.D., Eleanor M. Slater, M.D., Anna H. Kandib, M.D., Robert W. Angevine, A. J. Creighton, Arthur F. G. Edgelow, Mervin Freeman, Adrian G. Gould, John O'Meara, Ben D. Paul, John B. Rieger, Anna E. Steffen, Edward S. Welles.

Chief of social service, out-patient department, Mary C. Jarrett, A.B.

Clinical historian, Elizabeth Chapman.

GRAFTON STATE HOSPITAL, FORMERLY WORCESTER STATE ASYLUM (opened 1877): —

Trustees: Leander F. Herrick, Worcester, chairman; Mrs. Margaret A. Cashman, Newburyport, secretary; Roger W. Cutler, Boston; Dr. Peter O. Shea, Worcester; Henry J. Perreault, Worcester; John P. Bowditch, Framingham; Mrs. Charlotte R. F. Ladd, Sturbridge.

Superintendent and treasurer, James V. May, M.D.

Senior assistant physicians, Hiram L. Horsman, M.D., Arthur E. Pattrell, M.D.

Assistant physicians, William A. MacIntyre, M.D., George K. Butterfield, M.D., Mary Johnson, M.D., Ada F. Harris, M.D.

Steward, John McRae.

Pathologist, Douglas A. Thom, M.D.

Visiting surgeon, Lemuel F. Woodward, M.D.

Dentists, Adelard J. Harpin, D.M.D., Worcester; Ernest P. Brigham, D.M.D., Grafton.

Visiting days, for relatives or friends, every day; for the general public, every day except Sunday.

Grafton Department: —

The Grafton Department is situated on the main line of the Boston & Albany Railroad, between Worcester and Westborough, about eight miles from Worcester, and can be reached by trolley from Worcester or from the Westborough or North Grafton stations of the Boston & Albany Railroad, or from the Lyman Street crossing of the Boston & Worcester electric cars. Correspondence relating to patients at the Grafton Department should be addressed to the superintendent, Grafton State Hospital, North Grafton, Mass.

Worcester Department: —

The Worcester Department is located in the building formerly known as the Worcester State Asylum, on Summer Street, Worcester, about five minutes' walk from the Union Station (Boston & Albany, Boston & Maine, and New York, New Haven & Hartford Railroads). Correspondence relating to patients in the Worcester Department should be addressed to the superintendent, Grafton State Hospital, Worcester, Mass. Correspondence intended for the steward or treasurer of the hospital should be addressed to the Grafton State Hospital, North Grafton, Mass.

GRAFTON STATE HOSPITAL, FORMERLY WORCESTER STATE ASYLUM (opened 1877) — *Concluded.*

Patients are subject to transfer from one department to the other when transfers are necessary to relieve overcrowding of the wards or when it is believed that such a change will be for the benefit of the patient. Relatives and friends will be promptly notified of such transfers.

MEDFIELD STATE HOSPITAL (opened 1896): —

Post office, Harding; railroad station, Medfield Junction (New York, New Haven & Hartford).

Trustees: Walter Rapp, Brockton, chairman; Albert Evans, M.D., Boston, secretary; Mrs. Sarah J. Rand, Cambridge; Mrs. Nellie Barker Palmer, Framingham; George O. Clark, M.D., Boston; David M. Kasanof, Roxbury; Hon. J. C. Joseph Flamand, Cambridge.

Regular meeting, first Thursday following the first Tuesday of each month.

Superintendent and treasurer, Edward French, M.D.

Assistant physicians, George E. McPherson, M.D., George A. Troxell, M.D., Walter Burrier, M.D., Anna J. Waite, M.D., Agnes Muldoon, M.D., John D. Thomas, D.D.S.

Steward, Louis A. Hall.

Visiting days, every day.

Location, Asylum Road, one mile from Medfield Junction railroad station.

GARDNER STATE COLONY (opened 1902): —

Post office, Gardner; railroad station, East Gardner.

Trustees: Edmund A. Whitman, Cambridge, chairman; Mrs. Amie H. Coes, Worcester, secretary; Owen A. Hoban, Gardner; George N. Harwood, Barre; Mrs. Alice Miller Spring, Fitchburg; Thomas H. Shea, Fitchburg.

Regular meeting, first Friday occurring on or after the fourth day of each month.

Superintendent and treasurer, Charles E. Thompson, M.D.

Assistant superintendent, Harlan L. Paine, M.D.

Assistant physicians, James L. MacAuslan, M.D., Marion E. Kenworthy, M.D.

Visiting days, every day at any hour, including Sundays and holidays.

Location, East Gardner, two minutes' walk from East Gardner railroad station.

MONSON STATE HOSPITAL (opened 1898): —

Post office and railroad station, Palmer (Boston & Albany).

Trustees: Michael I. Shea, M.D., Chicopee Falls, chairman;

William Jameson, Chicopee Falls, secretary; Mrs. Mary B.

Townsend, Springfield; George A. Moore, M.D., Palmer;

George D. Storrs, Ware; Mrs. Mary E. Donahue, Melrose

Highlands; J. Ubalde Paquin, M.D., New Bedford.

Regular meeting, first Thursday of each month.

Superintendent, Everett Flood, M.D.

Assistant superintendent, Morgan B. Hodskins, M.D.

Senior assistant physician, Ransom A. Greene, M.D.

Assistant physicians, Helen Taft Cleaves, M.D., Donald J.

MacLean, M.D., Erwin S. Bundy, M.D.

Pathologist, Herman Caro, M.D.

Treasurer, Sarah E. Spalding.

Steward, Charles F. Simonds.

Visiting days, every day.

Staff meetings, every day except Sundays and holidays at
11.15 A.M.

Location, one mile from railroad station.

FOXBOROUGH STATE HOSPITAL (opened 1893. Devoted exclusively to the care of the insane since June 1, 1914): —

Trustees: Henry T. Schæfer, Boston, chairman; Thomas

J. Scanlan, M.D., Boston, secretary; Mrs. Mary Agnes

Mahan, Boston; Isaac Heller, Boston; Edward C. Don-

nelly, Dedham; Maxime Lepine, Lowell.

Regular meeting, second Thursday of each month.

Superintendent and treasurer, Albert C. Thomas, M.D.

Assistant physicians, James F. McFadden, M.D., Eudora

W. Faxon, M.D.

Steward, William A. Carpenter.

Visiting days, every day from 9 to 11 A.M. and 2 to 5 P.M.

Staff meetings, daily, at 8.30 A.M.

Location, one mile north of Foxborough Center. Can be
reached by trolley from Norwood or Mansfield (New
York, New Haven & Hartford).

MASSACHUSETTS SCHOOL FOR THE FEEBLE-MINDED AT WALTHAM
(opened 1848): —

Post office and railroad station, Waverley (Boston & Maine).

Trustees appointed by the Governor: Francis J. Barnes,

M.D., Cambridge; Edward W. Emerson, M.D., Concord;

MASSACHUSETTS SCHOOL FOR THE FEEBLE-MINDED AT WALTHAM
(opened 1848) — *Concluded.*

Prof. Thomas N. Carver, Cambridge; Frederick H. Nash, Auburndale; Frank H. Stewart, Newton; Miss Lucia L. Jaquith, Worcester.

Trustees appointed by the corporation: Frank G. Wheatley, M.D., North Abington, president; Charles Francis Adams, 2d, Concord, vice-president; Charles E. Ware, Fitchburg, secretary; Joseph B. Warner, Boston; Francis H. Dewey, Worcester; H. C. Bumpus, Ph.D., Medford.

Quarterly meeting, second Thursday of October, January, April and July.

Superintendent and treasurer, Walter E. Fernald, M.D.

Assistant physicians, Anna M. Wallace, M.D., Edith Woodill, M.D., Jonathan H. Ranney, M.D., L. Maude Warren, M.D., C. Stanley Raymond, M.D.

Visiting days, for the parents or friends of the patients, every day; for the general public, every day, except Sunday.

Staff meetings, daily, at 9 A.M.

Location, near Clematis Brook station (Fitchburg Division, Boston & Maine); about one mile from Waverley station (Fitchburg Division and Southern Division, Boston & Maine).

WRENTHAM STATE SCHOOL (opened 1907): —

Post office and railroad station, Wrentham.

Trustees: Albert L. Harwood, Newton, chairman; Ellerton James, Milton, secretary; Patrick J. Lynch, Beverly; George W. Gay, M.D., Newton; Mrs. Susanna W. Berry, Nahant; Mrs. Mary Stewart Scott, Brookline; Herbert C. Parsons, Boston.

Regular meeting, second Thursday of each month.

Superintendent and treasurer, George L. Wallace, M.D.

Assistant physicians, Franklin H. Perkins, M.D., Arthur R. Pillsbury, M.D., Mildred A. Libby, M.D.

Visiting allowed every day.

Location, Emerald Street, Wrentham, one mile from railroad station (New York, New Haven & Hartford).

BRIDGEWATER STATE HOSPITAL (opened 1886, 1895): —

Post office, State Farm; railroad station, Titicut (New York, New Haven & Hartford).

Trustees: trustees of State Infirmary and State Farm.

BRIDGEWATER STATE HOSPITAL (opened 1886, 1895) — *Concluded.*

Medical director, Ernest B. Emerson, M.D.

Assistant physicians, John H. Weller, M.D., Lonnie O. Farrar, M.D., Wilmarth Y. Seymour, M.D., George H. Crofton, M.D.

Visiting days, for relatives or friends of patients, every day; for the general public, every day, with the exception of Sundays and holidays.

Staff meetings, daily, at 10 A.M.

Location, one-quarter mile from railroad station.

MENTAL WARDS, STATE INFIRMARY (opened 1866):—

Post office, Tewksbury; railroad stations, Baldwin (Western Division, Boston & Maine), Tewksbury Junction and Salem Junction (Southern Division, Boston & Maine).

Trustees: Leonard Huntress, M.D., Lowell, chairman; Mrs. Nellie E. Talbot, Brookline, secretary; Galen L. Stone, Brookline; Francis W. Anthony, M.D., Haverhill; Dennis D. Sullivan, Middleborough; Mrs. Mary E. Cogan, Stoneham; Walter F. Dearborn, Ph.D., Cambridge.

Regular meeting, usually during last week of month, alternately at State Infirmary and State Farm.

Superintendent, John H. Nichols, M.D.

Assistant superintendent and physician, George A. Pierce, M.D.

Assistant physicians, Alfred J. Roach, M.D., Sherman Perry, M.D., Harry R. Coburn, M.D., Earl C. Willoughby, M.D., George McLeod Waldie, M.D., John C. Lindsay, M.D., Marie Strom Lindsay, M.D., Charles L. Trickey, M.D., William T. Hanson, M.D., Holland G. Hambleton, M.D., Emily A. Pratt, M.D.

Dentist, Frederick E. Twitchell, D.M.D.

Oculist, Thomas H. Odeneal, M.D.

Visiting days, every day from 10 A.M. to 4 P.M.

Staff meetings, daily, at 8 A.M.

Location, about one-half mile from railroad and from electric cars. Coach from infirmary meets most of the trains.

PRIVATE.

FOR INSANE, EPILEPTIC AND PERSONS ADDICTED TO THE INTEMPERATE USE OF NARCOTICS OR STIMULANTS.

McLEAN HOSPITAL (opened 1818):—

Department of Massachusetts General Hospital Corporation.

Post office and railroad station, Waverley (Boston & Maine).

President, Henry P. Walcott, M.D., Boston; treasurer, C. H. W. Foster, Needham; secretary, John A. Blanchard, Boston.

Trustees appointed by the Governor: David P. Kimball, Boston; Joseph H. O'Neil, Boston; Mrs. Nathaniel Thayer, Boston; Philip L. Saltonstall, Milton.

Trustees appointed by the corporation: Henry P. Walcott, M.D., Cambridge; Francis H. Appleton, Boston; Nathaniel T. Kidder, Boston; C. H. W. Foster, Needham; John Lowell, Boston; Charles P. Greenough, Boston; George Wigglesworth, Boston; Moses Williams, Boston.

Regular meeting, usually at the office of the treasurer, 50 State Street, Boston, on Fridays at intervals of two weeks, beginning sixteen days after the first Wednesday in February.

Superintendent, George T. Tuttle, M.D.

First assistant physician, Frederic H. Packard, M.D.

Second assistant physician, Theodore A. Hoch, M.D.

Assistant physician, Ray L. Whitney, M.D.

Assistant physician and pathologist, E. Stanley Abbott, M.D.

Assistant in pathological psychology, F. Lyman Wells, Ph.D.

Junior assistant physicians, Clifford G. Rounsefell, M.D., Ivan R. Stidger, M.D., Walter J. Otis, M.D.

Visiting days, week days.

Staff meetings, regularly, Tuesdays, at 8.30 A.M.; irregularly on other days, at the same hour.

Location, Pleasant Street, one-third mile from railroad station.

BOURNEWOOD, Henry R. Stedman, M.D., South Street, Brookline. Railroad station, Bellevue (Dedham Division, New York, New Haven & Hartford). Fifteen minutes' walk. Carriage by previous arrangement.

CHANNING SANITARIUM, Walter Channing, M.D., 701 Chestnut Hill Avenue, Brookline. Railroad station, Reservoir (Boston & Albany). Carriage. Or Chestnut Hill street car to Chestnut Hill Avenue.

HERBERT HALL HOSPITAL, Walter C. Haviland, M.D., Salisbury Street, Worcester. Salisbury Street electric car from City Hall Square.

NEWTON SANATORIUM, N. Emmons Paine, M.D., West Newton. Carriage. Or Newton Boulevard street car to Washington Street.

WELLESLEY NERVINE, Edward H. Wiswall, M.D., Washington Street, Wellesley.

LOCUST GROVE SANITARIUM, Miss Alice R. Cooke, Sandwich; medical director, George E. White, M.D. Carriage.

FRAMINGHAM NERVINE, Ellen L. Keith, M.D., Winter Street, Framingham.

SHERWOOD, J. F. Edgerly, M.D., Lincoln. About two miles from railroad station.

HIGHLAND HALL, Samuel L. Eaton, M.D., 340 Lake Avenue, Newton Highlands.

DR. REEVES' NERVINE, Harriet E. Reeves, M.D., 283 Vinton Street, Melrose Highlands.

PRIVATE HOSPITAL, William J. Vivian, M.D., East Walpole (Wrentham Branch, New York, New Haven & Hartford, or Norwood Central trains and electrics).

WHEELER SANITARIUM, Mrs. Maria H. Paul, 32 Copeland Street, Roxbury. Elevated to Dudley Street; Warren Street car.

ARLINGTON HEALTH RESORT, Arthur H. Ring, M.D., Arlington Heights. Carriage.

PRIVATE HOSPITAL, Edward B. Lane, M.D., Wellesley. Address, 419 Boylston Street, Boston.

PRIVATE HOSPITAL FOR MENTAL DISEASES, Edward Mellus, M.D., 419 Waverley Avenue, Newton. Carriage. Or Commonwealth Avenue car to Grant Avenue.

GLENSIDE, Mabel D. Ordway, M.D., 6 Parley Vale, Jamaica Plain.

KNOLLWOOD, Earle E. Bessey, M.D., corner Beacon Street and Waban Avenue, Waban (Boston & Albany).

PRIVATE HOSPITAL, Sara E. Stevens, M.D., 31 Linnet Street, West Roxbury (New York, New Haven & Hartford).

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